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DEPARTMENT OF ENVIRONMENTAL QUALITY  
STATE A Q PROGRAM



**DEQ AIR QUALITY PROGRAM**  
1410 N. Hilton, Boise, ID 83706  
For assistance, call the  
**Air Permit Hotline – 1-877-5PERMIT**

Cover Sheet for Air Permit Application – Permit to Construct **Form CSPTC**

Please see instructions on page 2 before filling out the form.

COMPANY NAME, FACILITY NAME, AND FACILITY ID NUMBER			
1. Company Name	Interstate Group, LLC		
2. Facility Name	N 39th Street, Nampa, Idaho		3. Facility ID No.
4. Brief Project Description - One sentence or less	Transferring Permitted Manufacturing Facilities to New Location		
PERMIT APPLICATION TYPE			
5.	<input checked="" type="checkbox"/> New Source <input type="checkbox"/> New Source at Existing Facility <input type="checkbox"/> PTC for a Tier I Source Processed Pursuant to IDAPA 58.01.01.209.05.c <input type="checkbox"/> Unpermitted Existing Source <input type="checkbox"/> Facility Emissions Cap <input type="checkbox"/> Modify Existing Source: Permit No.: _____ Date Issued: _____ <input type="checkbox"/> Required by Enforcement Action: Case No.: _____		
6.	<input checked="" type="checkbox"/> Minor PTC <input type="checkbox"/> Major PTC		
FORMS INCLUDED			
Included	N/A	Forms	DEQ Verify
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Form CSPTC – Cover Sheet	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Form GI – Facility Information	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Form EU0 – Emissions Units General	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form EU1– Industrial Engine Information      Please specify number of EU1s attached: _____	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form EU2– Nonmetallic Mineral Processing Plants      Please specify number of EU2s attached: _____	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Form EU3– Spray Paint Booth Information      Please specify number of EU3s attached: 2	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form EU4– Cooling Tower Information      Please specify number of EU3s attached: _____	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form EU5 – Boiler Information      Please specify number of EU4s attached: _____	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form CBP– Concrete Batch Plant      Please specify number of CBPs attached: _____	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form HMAP – Hot Mix Asphalt Plant      Please specify number of HMAPs attached: _____	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	PERF – Portable Equipment Relocation Form	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form AO – Afterburner/Oxidizer	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form CA – Carbon Adsorber	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form CYS – Cyclone Separator	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form ESP – Electrostatic Precipitator	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form BCE– Baghouses Control Equipment	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form SCE– Scrubbers Control Equipment	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form VSCE – Venturi Scrubber Control Equipment	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Form CAM – Compliance Assurance Monitoring	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Forms EI– Emissions Inventory      See Narrative Tables 2-1, 2-2, 3-1, 3-2, 3-3, 3-4, 3-5, 4-1, 4-2, 4-3, 4-4, 4-5, 4-6 and 6-1	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	PP – Plot Plan	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Forms MI1 – MI4 – Modeling      (Excel workbook, all 4 worksheets)	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Form FRA – Federal Regulation Applicability	<input type="checkbox"/>



Please see instructions on back page before filling out the form. All information is required. If information is missing, the application will not be processed.

**Identification**

1. Facility name  2. Existing facility identification number   Check if new facility (not yet operating)

3. Brief project description

**Facility Information**

4. Primary facility permitting contact name  Contact type   
 Telephone number  E-mail

5. Alternate facility permitting contact name  Alternate contact type   
 Telephone number  E-mail

6. Mailing address where permit will be sent (street/city/county/state/zip code)

7. Physical address of permitted facility (if different than mailing address) (street/city/county/state/zip code)

8. Is the equipment portable?  Yes\*  No \*If yes, complete and attach PERF; see instructions.

9. NAICS codes: Primary NAICS  Secondary NAICS

10. Brief business description and principal product produced

11. Identify any adjacent or contiguous facility this company owns and/or operates

12. Specify type of application  Permit to construct (PTC); application fee of \$1,000 required. See instructions.  
 Tier I permit  Tier II permit  Tier II/Permit to construct

For Tier I permitted facilities only: If you are applying for a PTC then you must also specify how the PTC will be incorporated into the Tier I permit.

Co-process Tier I modification and PTC  Incorporate PTC at the time of Tier I renewal  Administratively amend the Tier I permit to incorporate the PTC upon applicant's request (IDAPA 58.01.01.209.05.a, b, or c)

**Certification**

In accordance with IDAPA 58.01.01.123 (Rules for the Control of Air Pollution in Idaho), I certify based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.

13. Responsible official's name  Official's title   
 Official's address   
 Telephone number  E-mail   
 Official's signature  Date

14. Check here to indicate that you want to review the draft permit before final issuance.



Please see instructions on page 2 before filling out the form.

IDENTIFICATION		
1. Company Name: Interstate Group, LLCC	2. Facility Name: 605 N 39th Street, Nampa, Idaho	3. Facility ID No:
4. Brief Project Description: Transferring Permitted Manufacturing Facilities to New Location		

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION	
5. Emissions Unit (EU) Name:	MAKE-UP AIR UNIT
6. EU ID Number:	MAU1
7. EU Type:	<input checked="" type="checkbox"/> New Source <input type="checkbox"/> Unpermitted Existing Source    Modification to a Permitted Source -- Previous Permit #:    Date Issued:
8. Manufacturer:	Titan
9. Model:	TA-122 NG VRH
10. Maximum Capacity:	1,925,000 BTU/HR
11. Date of Construction:	May 2016
12. Date of Modification (if any):	
13. Is this a Controlled Emission Unit?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes    If Yes, complete the following section. If No, go to line 22.

EMISSIONS CONTROL EQUIPMENT						
14. Control Equipment Name and ID:						
15. Date of Installation:			16. Date of Modification (if any):			
17. Manufacturer and Model Number:						
18. ID(s) of Emission Unit Controlled:						
19. Is operating schedule different than emission units(s) involved? <input type="checkbox"/> Yes <input type="checkbox"/> No						
20. Does the manufacturer guarantee the control efficiency of the control equipment? <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, attach and label manufacturer guarantee)						
Control Efficiency	Pollutant Controlled					
	PM	PM10	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO

21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)	
22. Actual Operation:	2080 HRS/YR 4 days/week 10hrs/day, 50 weeks/year
23. Maximum Operation:	8760 HRS/YR

REQUESTED LIMITS	
24. Are you requesting any permit limits?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If Yes, indicate all that apply below)
<input type="checkbox"/> Operation Hour Limit(s):	
<input type="checkbox"/> Production Limit(s):	
<input type="checkbox"/> Material Usage Limit(s):	
<input type="checkbox"/> Limits Based on Stack Testing:	
<input type="checkbox"/> Other:	
25. Rationale for Requesting the Limit(s):	



Please see instructions on page 2 before filling out the form.

IDENTIFICATION						
1. Company Name:	2. Facility Name:		3. Facility ID No:			
Interstate Group, LLC	605 N 39th Street, Nampa, ID					
4. Brief Project Description:			Transferring Permitted Manufacturing Facilities to New Location			
EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION						
5. Emissions Unit (EU) Name:	UNIT HEATERS 1 - 10					
6. EU ID Number:	UH1 - UH10					
7. EU Type:	<input checked="" type="checkbox"/> New Source <input type="checkbox"/> Unpermitted Existing Source    Modification to a Permitted Source -- <input type="checkbox"/> Previous Permit #: _____ Date Issued: _____					
8. Manufacturer:	SunStar Heating Products					
9. Model:	SIR-35					
10. Maximum Capacity:	35,000 BTU/HR EACH HEATER					
11. Date of Construction:						
12. Date of Modification (if any):						
13. Is this a Controlled Emission Unit?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes    If Yes, complete the following section. If No, go to line 22.					
EMISSIONS CONTROL EQUIPMENT						
14. Control Equipment Name and ID:						
15. Date of Installation:			16. Date of Modification (if any):			
17. Manufacturer and Model Number:						
18. ID(s) of Emission Unit Controlled:						
19. Is operating schedule different than emission units(s) involved? <input type="checkbox"/> Yes <input type="checkbox"/> No						
20. Does the manufacturer guarantee the control efficiency of the control equipment? <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, attach and label manufacturer guarantee)						
Control Efficiency	Pollutant Controlled					
	PM	PM10	SO <sub>2</sub>	NOx	VOC	CO
21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.						
EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)						
22. Actual Operation:		2080 HRS/YR 4 days/week 10hrs/day, 50 weeks/year				
23. Maximum Operation:		8760 HRS/YR				
REQUESTED LIMITS						
24. Are you requesting any permit limits? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If Yes, indicate all that apply below)						
<input type="checkbox"/> Operation Hour Limit(s):						
<input type="checkbox"/> Production Limit(s):						
<input type="checkbox"/> Material Usage Limit(s):						
<input type="checkbox"/> Limits Based on Stack Testing:						
<input type="checkbox"/> Other:						
25. Rationale for Requesting the Limit(s):						



Please see instructions on page 2 before filling out the form.

**IDENTIFICATION**

1. Company Name: Interstate Group, LLC	2. Facility Name: 605 N 39th Street, Nampa	3. Facility ID No:
4. Brief Project Description: Transferring Permitted Manufacturing Facilities to New Location		

**BOOTH INFORMATION**

5. Booth Type:	<input checked="" type="checkbox"/> New Booth	<input type="checkbox"/> Unpermitted Existing Booth	<input type="checkbox"/> Modification to a Permitted Booth, Permit #:	Date Issued: GFS, Model CDG, 1412NDT-50-SS-S
6. Construction Date:	May 2016			

**SPRAY GUN DESCRIPTION AND SPECIFICATIONS**

Gun No.	7. Manufacturer	8. Model	9. Type	10. Transfer Eff. %	11. Rated Capacity (gal/hr)
1	Graco	AirPro	HVLP	70-80	4.7
2				65 used in emiss estimates	
3					
4					

Number of guns to be used simultaneously: 1

**SPRAY MATERIAL DESCRIPTION AND SPECIFICATIONS**

12. Type of Spray Material Used	13. Type of Material Coated	14. Max. Usage (gal/day)	15. Solid TAP/HAP Content (lb/gal)	16. VOC TAP/HAP Content (lb/gal)	17. MSD (Y/N)
Various Paints; See Table 3-1	Metal and Wood	80	See Table 3-1	See Table 3-1	Y

**REQUEST FOR PERMIT LIMITATIONS**

18. Are you requesting any permit limits? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes. If Yes, check all that apply below and fill in requested limit(s)	
<input type="checkbox"/> Operation Hour Limits:	<input type="checkbox"/> Production Limits:
<input checked="" type="checkbox"/> Material Usage Limits: See narrative section 3.3 and Table 3-1	<input type="checkbox"/> Other:
19. Rationale for Requesting the Limit(s): Limit site VOC emissions below 100 tons per year, TAPS below ELs, HAPs below 10 ton/year.	

**EMISSION CONTROL DEVICE (FILTER<sup>b</sup>) DESCRIPTION AND SPECIFICATIONS**

Stack Served	20. Filter Manufacturer	21. Model	22. PM Control Efficiency(%) <sup>a</sup>	23. Dimension (Total Area, Thickness and Number of Filters)
Stack 1	Chemco	Fiberglass	98.65	100.8 Sq Feet total
Stack 2				2 inch thick, 36 20-inch X 20-inch filters
Stack 3				
Stack 4				

Notes: a. Provide either stack test data or vendor's documentation to support the control efficiency specified above.  
 b. Fill out and submit appropriate control equipment form(s) if this booth has a control device(s) other than a filter system.

**BOOTH OPERATING SCHEDULE (indicate hours/day, hours/year, or other)**

24. Actual Operation: 2080 HRS/YR 4 days/week 10hrs/day 52 weeks/year	25. Maximum Operation: 8760 hours/year
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Please see instructions on page 2 before filling out the form.

**IDENTIFICATION**

1. Company Name: Interstate Group, LLC	2. Facility Name: 605 N 39th Street, Nampa	3. Facility ID No:
4. Brief Project Description: Transferring Permitted Manufacturing Facilities to New Location		

**BOOTH INFORMATION**

5. Booth Type:	<input checked="" type="checkbox"/> New Booth <input type="checkbox"/> Unpermitted Existing Booth	Custom-Partial Enclosure
	<input type="checkbox"/> Modification to a Permitted Booth, Permit #:	, Date Issued:
6. Construction Date: Projected July 2016		

**SPRAY GUN DESCRIPTION AND SPECIFICATIONS**

Gun No.	7. Manufacturer	8. Model	9. Type	10. Transfer Eff. %	11. Rated Capacity (gal/hr)
1	Graco	Graco II FTX II	Airless	40	Not Avail.
2					
3					
4					

Number of guns to be used simultaneously: 1

**SPRAY MATERIAL DESCRIPTION AND SPECIFICATIONS**

12. Type of Spray Material Used	13. Type of Material Coated	14. Max. Usage (gal/day)	15. Solid TAP/HAP Content (lb/gal)	16. VOC TAP/HAP Content (lb/gal)	17. MSD (Y/N)
Z Guard 1021FRX	Metal	34	0	2.0	Y

**REQUEST FOR PERMIT LIMITATIONS**

18. Are you requesting any permit limits? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes. If Yes, check all that apply below and fill in requested limit(s)	
<input type="checkbox"/> Operation Hour Limits:	<input type="checkbox"/> Production Limits:
<input checked="" type="checkbox"/> Material Usage Limits: See narrative Section 3.3 and Table 3-3	<input type="checkbox"/> Other:
19. Rationale for Requesting the Limit(s): Limit site VOC emissions below 100 tons per year, TAPS below ELs, HAPs below 10 ton/year.	

**EMISSION CONTROL DEVICE (FILTER<sup>b</sup>) DESCRIPTION AND SPECIFICATIONS**

Stack Served	20. Filter Manufacturer	21. Model	22. PM Control Efficiency(%) <sup>a</sup>	23. Dimension (Total Area, Thickness and Number of Filters)
Stack 1	Chemco	Fiberglass	96.0	50.4 sq. ft, 2 inch thick,
Stack 2			Based on PTC	18 20-inch X 20-inch filters
Stack 3			P-2013.0043	
Stack 4				

Notes: a. Provide either stack test data or vendor's documentation to support the control efficiency specified above.  
 b. Fill out and submit appropriate control equipment form(s) if this booth has a control device(s) other than a filter system.

**BOOTH OPERATING SCHEDULE (indicate hours/day, hours/year, or other)**

24. Actual Operation: 2080 HRS/YR 4 days/week 10hrs/day 52 weeks/year	25. Maximum Operation: 8760 hours/year
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Please see instructions on pages 3-8 before filling out the form.

IDENTIFICATION			
1. Company Name:	Interstate Group, LLC	2. Facility Name:	605 N 39th Street Nampa
		3. Facility ID No.:	
4. Brief Project Description:	Transferring Permitted Manufacturing Facilities to New Location		

**MONITORING APPROACH SUBMITTAL**

Background		
5. Emissions Unit	Description (type of emission point): Paint Spray Booths and Undercoat Booth	Identification (emission point number): PB1 and PB2
6. Applicable Regulation, Emission Limits, and Monitoring Requirements	Applicable regulation citation:	Pollutant: TAPs: Emission limit: TAP ELs Pollutant: HAPs: Emission limit: 10 tons/year Pollutant: VOCs Emission limit: 100 tons/year  <u>Monitoring requirements: Paint use and emission records</u>
7. Control Technology	Brief description: Paint Usage Limits	

Table 1. Monitoring Approach			
	Indicator No. 1	Indicator No. 2	Indicator No. 3
I. Indicator Description	Gals. of Paint per month		
Measurement Approach	Monitoring usage		
II. Indicator Range (Quality improvement plan threshold optional)	less than 100 gals per month		
III. Performance Criteria	_____	_____	_____
A. Data Representativeness			
B. Verification of Operational Status			
C. QA/QC Practices and Criteria			
D. Monitoring Frequency	Monthly paint usage records		
Data Collection Procedures	Paint booth operators record paint used		
Averaging Period	Monthly and Yearly		

Justification	Present justification for selection of monitoring approach(es) and indicator range(s): Justification for Indicator 1: Limiting TAP emissions to EL will ensure all criteria, TAP, and HAP emissions are below limits.
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**IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION**  
1410 N. Hilton, Boise, ID 83706  
For assistance, call the  
**Air Permit Hotline – 1-877-5PERMIT**

**Preapplication Meeting Information  
Form FRA (Federal Requirements Applicability) -  
Regulatory Review**

In each box in the table below, CTRL+click on the blue underlined text for instructions and information.

IDENTIFICATION	
1. Company Name:  Interstate Group, LLC	2. Facility Name:  605 N 39th Street, Nampa, ID
3. Brief Project Description:      Transferring Permitted Manufacturing Facilities to New Location	
APPLICABILITY DETERMINATION	
4. List all applicable subparts of the New Source Performance Standards (NSPS) ( <a href="#">40 CFR part 60</a> ).  List all non-applicable subparts of the NSPS which may appear to apply to the facility but do not.  Examples of NSPS-affected emissions units include internal combustion engines, boilers, turbines, etc. Applicant must thoroughly review the list of affected emissions units.	List of all applicable subpart(s):  See Narrative Section 7.1  List of all non-applicable subpart(s) which may appear to apply but do not:  <input checked="" type="checkbox"/> Not Applicable
5. List applicable subpart(s) of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) ( <a href="#">40 CFR part 61</a> and <a href="#">40 CFR part 63</a> ).  List all non-applicable subparts of the NESHAP which may appear to apply to the facility but do not.  Examples of affected emission units include solvent cleaning operations, industrial cooling towers, paint stripping and miscellaneous surface coating. Reference <a href="#">EPA's webpage on NESHAPs</a> for more information.	List of all applicable subpart(s):  See Narrative Section 7.2  List of all non-applicable subpart(s) which may appear to apply but do not:  See Narrative Section 7.2  <input type="checkbox"/> Not Applicable
6. For each subpart identified above, conduct a complete regulatory analysis using the instructions and referencing the example on the following pages.  <b>Note</b> - Regulatory reviews must be submitted with sufficient detail so that DEQ can verify applicability and document in legal terms why the regulation does or does not apply. Regulatory reviews submitted with insufficient detail will be determined incomplete.	<input checked="" type="checkbox"/> A detailed regulatory review is provided (Follow instructions and example).  <input type="checkbox"/> DEQ has already been provided a detailed regulatory review. Give a reference to the document including the date.

AIR QUALITY PRE-CONSTRUCTION PERMIT TO CONSTRUCT  
APPLICATION FORMS AND DOCUMENTATION

Interstate Group, LLC.  
605 N 39<sup>th</sup> Street  
Nampa, Idaho 83687

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June 16, 2016

Prepared for: Interstate Group, LLC.  
2254 Carnation Drive  
Nampa, Idaho 83687

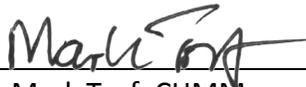
For the Facility at: 605 N 39<sup>th</sup> Street  
Nampa, Idaho 83687

Prepared by: TORF Environmental Management  
3459 E. Boulder Heights Drive  
Boise, Idaho 83712  
  
(208) 345-7222  
[www.torf.us](http://www.torf.us)



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Neil Fox, P.E.  
(208) 331-9204



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Mark Torf, CHMM  
(208) 345-7222



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Interstate Group, LLC, Nampa, Idaho  
June 16, 2016

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Interstate Group, LLC, Nampa, Idaho  
June 16, 2016

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AIR QUALITY PRE-CONSTRUCTION PERMIT TO CONSTRUCT  
APPLICATION FORMS AND DOCUMENTATION  
INTERSTATE GROUP, LLC.  
605 N 39<sup>th</sup> Street, Nampa, Idaho 83687

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## 1. SUMMARY

Interstate Group, LLC (Interstate) proposes a new Air Quality Permit to Construct (PTC) for its over-the-road trailer manufacturing facility at 605 N 39<sup>th</sup> Street, Nampa, Idaho 83687. Authorization for Pre-Construction Approval is requested in the letter presented on 1-2, below. A completed 15- Day Pre-Permit Construction Approval Application Completeness Checklist is presented on pages 1-3 – 1-5 below. A copy of the Public Information Notice, as published in the Idaho Press-Tribune on June 13, 2016 is presented on Pages 1-6 and 1-7, below. A Process Flow Diagram is present on page 1-8, below. An Equipment List is present on page 1-9 – 1-11, below. A Schedule for Construction is presented on page 1-12, below.

Transferring the existing manufacturing facility with the existing Permit to Construct No. P-2013.0034 from 224 Carnation Drive, Nampa, Idaho to 605 N 39<sup>th</sup> Street, Nampa, is the reason for this application.

Constructing the trailers involves welding the frame channel rails and completing the skeletal structure of the trailer using bent and straight metal tubes. Following completion of the frames, the trailer box is attached to pre-manufactured axles and wheels. The trailer is then prepared for paint and wired for lighting. The next step is to apply paint materials to the sheet metal box shell in the paint booth. After painting, the wiring is completed. Plywood is installed for interior and floor surfaces and then the frame is undercoated. The outside of the trailer is covered with the prefinished sheet metal and the final trim and accessories are installed.

The facility is not a major facility according to the Prevention of Significant Deterioration (PSD) and Permit to Construct standards for regulated pollutants.<sup>1</sup> Emission calculations demonstrate that post-project NSR regulated pollutant rates are less than 100 tons per year under the proposed usage limits. Under these limits, emissions of individual Hazardous Air Pollutants (HAP) are less than 10 tons per year and emissions of combined HAP are less than 25 tons per year. Therefore, the facility is not a major facility based on the Title V standards for criteria or Hazardous Air Pollutants (HAP).<sup>2</sup> Uncontrolled emissions of all Toxic Air Pollutants (TAP) are less than or equal to Screening Emission Levels.<sup>3</sup>

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<sup>1</sup> Idaho Department of Environmental Quality (IDEQ), Rules for the Control of Air Pollution in Idaho, IDAPA 58 title 01, Chapter 01, Section 200.

<sup>2</sup> Ibid., Section 008.10.

<sup>3</sup> Ibid., Section 210.08.



Interstate Group, LLC  
224 Carnation Drive  
Nampa, Idaho 83687

June 15, 2016

Idaho Department of Environmental Quality  
Air Quality Division  
1410 N. Hilton  
Boise, ID 83706

Re: Request for Pre-Construction Approval, Air Quality Permit to Construct

To Whom It May Concern:

In accordance with Idaho Rules for the Control of Air Pollution in Idaho, IDAPA 58.01.01.213, I am writing to request approval for Pre-Permit Construction at Interstate Group, LLC's proposed new facility to be located at 605 N. 39<sup>th</sup> Street, Nampa, Idaho.

Our proposed new facility will be not be major source, does use netting to stay below major source levels, does not use optional offsets, and will not have an adverse impact on a Class I area (213.01). This request is submitted in association with our Application for Air Quality Permit to Construct (213.01a). We consulted with the Department of Environmental Quality regarding this request in a meeting at the Department on June 8, 2016 (213.01b).

This letter shall serve as Interstate's request for the ability to construct prior to obtaining the Permit to Construct (213.01c). Enclosed with this letter is a copy of the published notice of a scheduled informational meeting (213.01c). Our application materials submitted in conjunction with this request document the proposed materials, equipment list, process descriptions, estimated emissions, emission calculations supporting the estimates of regulated air pollutants and toxic air pollutants, and proposed emission limits that demonstrate compliance with applicable air quality rules and regulations as proof of eligibility (213.01c). The application materials describe the applicable operational restrictions and limits such that permitted emissions will be below major source levels or below a significant increase and I certify that the facility will comply with the restrictions, including any applicable monitoring and reporting requirements (213.01d).

Please do not hesitate to contact me with any questions you may have. I may be reached at (208) 442-7616 or via email at [bennettk@interstatecargo.com](mailto:bennettk@interstatecargo.com).

Based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Very truly yours,  
Interstate Group, LLC



Kevin Bennett  
Operations Manager

Enc. Published Notice of Informational Meeting



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## 15- Day Pre-Permit Construction Approval Application Completeness Checklist

**This checklist is designed to aid the applicant in submitting a complete pre-permit construction approval application. In addition to the items in this checklist, information requested by DEQ during review of the application should be provided in accordance with IDAPA 58.01.01.202.03, or the application may be denied.**

### **I. Actions Needed Before Submitting Application**

- Refer to the Rule. Read the Pre-Permit Construction requirements contained in IDAPA 58.01.01.213, Rules for the Control of Air Pollution in Idaho.
- Refer to DEQ's Pre-Permit Construction Approval Guidance Document. DEQ has developed a guidance document to aid applicants in submitting a complete pre-permit construction approval application. The guidance document is located on DEQ's website (go to [http://www.deq.idaho.gov/air/permits\\_forms/permitting/ptc\\_prepermit\\_guidance.pdf](http://www.deq.idaho.gov/air/permits_forms/permitting/ptc_prepermit_guidance.pdf))
- Consult with DEQ Representatives. Schedule a pre-application meeting with DEQ to discuss application requirements before submitting the pre-permit construction approval application. Schedule the meeting by contacting the DEQ Air Permit Hotline at **877-5PERMIT**. The meeting can be in person or on the phone. Refer to IDAPA 58.01.01.213.01b.
- Schedule Informational Meeting. Schedule an informational meeting before submitting the pre-permit construction approval application for the purposes of satisfying IDAPA 58.01.01.213.02.a. The purpose for the informational meeting is to provide information about the proposed project to the general public. Refer to IDAPA 58.01.01.213.01.c.
- Submit Ambient Air Quality Modeling Protocol. It is required that an ambient air quality modeling protocol be submitted to DEQ at least two (2) weeks before the pre-permit construction approval application is submitted. Contact DEQ's Air Quality Hotline at **877-5PERMIT** for information about the protocol.
- Written DEQ Approved Protocol. Written DEQ approval of the modeling protocol must be received before the pre-permit construction approval application is submitted. Refer to IDAPA 58.01.01.213.01.c.

### **II. Application Content**

**Application content should be prepared using the checklist below. The checklist is based on the requirements contained in IDAPA 58.01.01.213 and DEQ's Pre-Permit Construction Approval Guidance Document.**

- Pre-Permit Construction Eligibility and Proof of Eligibility. Pre-permit construction approval is not available for any new Prevention of Significant Deterioration (PSD) major source, any proposed PSD major modification, or any proposed major NSR project in a non-attainment area. Emissions netting and emissions offsets are not allowed to be used. A certified proof of pre-permit construction eligibility must be submitted with the pre-permit construction approval application. Refer to IDAPA 58.01.01.213.01.
- Request to Construct Before Obtaining a Permit to Construct. A letter requesting the ability to construct before obtaining the required permit to construct must be submitted with the pre-permit construction approval application. Refer to IDAPA 58.01.01.213.01.c.
- Apply for a Permit to Construct. Submit a Permit to Construct application using forms available on DEQ's website at <http://www.deq.idaho.gov>. Refer to IDAPA 58.01.01.213.01.a.



- Permit to Construct Application Fee. The permit to construct application fee of \$1000 must be submitted at the time the original pre-permit construction approval application is submitted. Refer to IDAPA 58.01.01.224. If the pre-permit construction approval is denied and a new application is submitted, a new \$1,000 application fee will be required to be submitted. The application fee is not transferable or refundable. The application fee can be paid by check, credit card or Electronic Funds Transfer (EFT). If you choose to pay by credit card or EFT, contact DEQ's Fiscal Office at (208) 373-0502 to complete the necessary paper work. If you choose to pay by check, enclose the check with your pre-permit construction approval application.
- Notice of Informational Meeting. Within 10 days after the submittal of the pre-permit construction approval application, an informational meeting must be held in at least one location in the region where the stationary source will be located. The information meeting must be made known by notice published at least 10 days before the informational meeting in a newspaper of general circulation in the county in which the stationary source will be located. A copy of this notice, as published, must be submitted with the pre-permit construction approval application. Refer to IDAPA 58.01.01.213.02.a. Additional information regarding the informational meeting is included in DEQ's Pre-Permit Construction Approval Guidance Document. (go to [http://www.deq.idaho.gov/air/permits\\_forms/permitting/ptc\\_prepermit\\_guidance.pdf](http://www.deq.idaho.gov/air/permits_forms/permitting/ptc_prepermit_guidance.pdf))
- Process Description(s). The process or processes for which pre-permit construction approval is requested must be described in sufficient detail and clarity such that a member of the general public not familiar with air quality can clearly understand the proposed project. A process flow diagram is required for each process for which pre-permit construction approval is requested. Refer to IDAPA 58.01.01.213.01.c.
- Equipment List. All equipment that will be used for which pre-permit construction approval is requested must be described in detail. Such description includes, but is not limited to, manufacturer, model number or other descriptor, serial number, maximum process rate, proposed process rate, maximum heat input capacity, stack height, stack diameter, stack gas flowrate, stack gas temperature, etc. All equipment that will be used for which pre-permit construction approval is requested must be clearly labeled on the process flow diagram. Refer to IDAPA 58.01.01.213.01.c.
- Scaled Plot Plan. A scaled plot plan is required, with the location of each proposed process and the equipment that will be used in each process clearly labeled.
- Schedule for Construction. A schedule for construction is required, including proposed dates for commencement and for completion of the project. For phased projects, proposed dates are required for each phase of the project.
- Proposed Emissions Limits and Modeled Ambient Concentration for All Regulated Air Pollutants. All proposed emission limits and modeled ambient concentrations for all regulated air pollutants must demonstrate compliance with all applicable air quality rules and regulations. Regulated air pollutants include criteria air pollutants (PM<sub>10</sub>, SO<sub>x</sub>, NO<sub>2</sub>, O<sub>3</sub>, CO, lead), toxic air pollutants listed pursuant to IDAPA 58.01.01.585 and 586, and hazardous air pollutants listed pursuant to Section 112 of the 1990 Clean Air Act Amendments (go to <http://www.epa.gov/ttn/atw/188polls.html>). Describe in detail how the proposed emissions limits and modeled ambient concentrations demonstrate compliance with each applicable air quality rule and regulation. It is requested that emissions calculations, assumptions, and documentation be submitted with sufficient detail so DEQ can verify the validity of the emissions estimates. Refer to IDAPA 58.01.01.213.01.c.
- Restrictions on a Source's Potential to Emit. Any proposed restriction on a source's potential to emit such that permitted emissions will be either below major source levels or below a significant increase must be described in detail in the pre-permit construction approval application. Refer to IDAPA 58.01.01.213.01.d.
- List all Applicable Air Quality Rules and Regulations. All applicable rules and regulations must be cited by the rule or regulation section/subpart that applies for each emissions unit. Refer to IDAPA 58.01.01.213.01.c.
- Certification of Pre-Permit Construction Approval Application. The pre-permit construction approval application must be signed by the Responsible Official and must contain a certification signed by the Responsible Official. The certification must state that, based on information and belief formed after



**Department of Environmental Quality**

1410 N. Hilton, Boise, ID 83706

For assistance, call the

Air Permit Hotline - 1-877-5PERMIT

AQ-CH-P004

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reasonable inquiry, the statements and information in the document are true, accurate, and complete. Refer to IDAPA 58.01.01.213.01.d and IDAPA 58.01.01.123.

- Submit the Pre-Construction Approval Application. Submit the pre-permit construction approval application and application fee to the following address:

Department of Environmental Quality  
Air Quality Division  
Stationary Source Program  
1410 North Hilton  
Boise, ID 83706-1255

Published in the Idaho Press-Tribune, 1618 N. Midland Blvd. Nampa, ID  
June 13, 2016

**LEGAL NOTICE**

**NOTICE OF  
INFORMATIONAL  
MEETING REGARDING  
PROPOSED NEW  
MANUFACTURING  
FACILITY**

An informational meeting will be held to discuss the air quality related aspects of Interstate Group, Inc.'s (aka Interstate Cargo, aka Trailers Plus) proposed new trailer manufacturing facility at 605 N 39th Street, Nampa, Idaho. The informational meeting will be held on 6/23/16 at 10:00 a.m. at 224 Carnation Dr. Nampa. This Notice is published in accordance with IDAPA 58, Title 01, Chapter 01, section 213.02.a.

June 13, 14, 15, 16, 2016  
1472427

**LEGAL NOTICE**

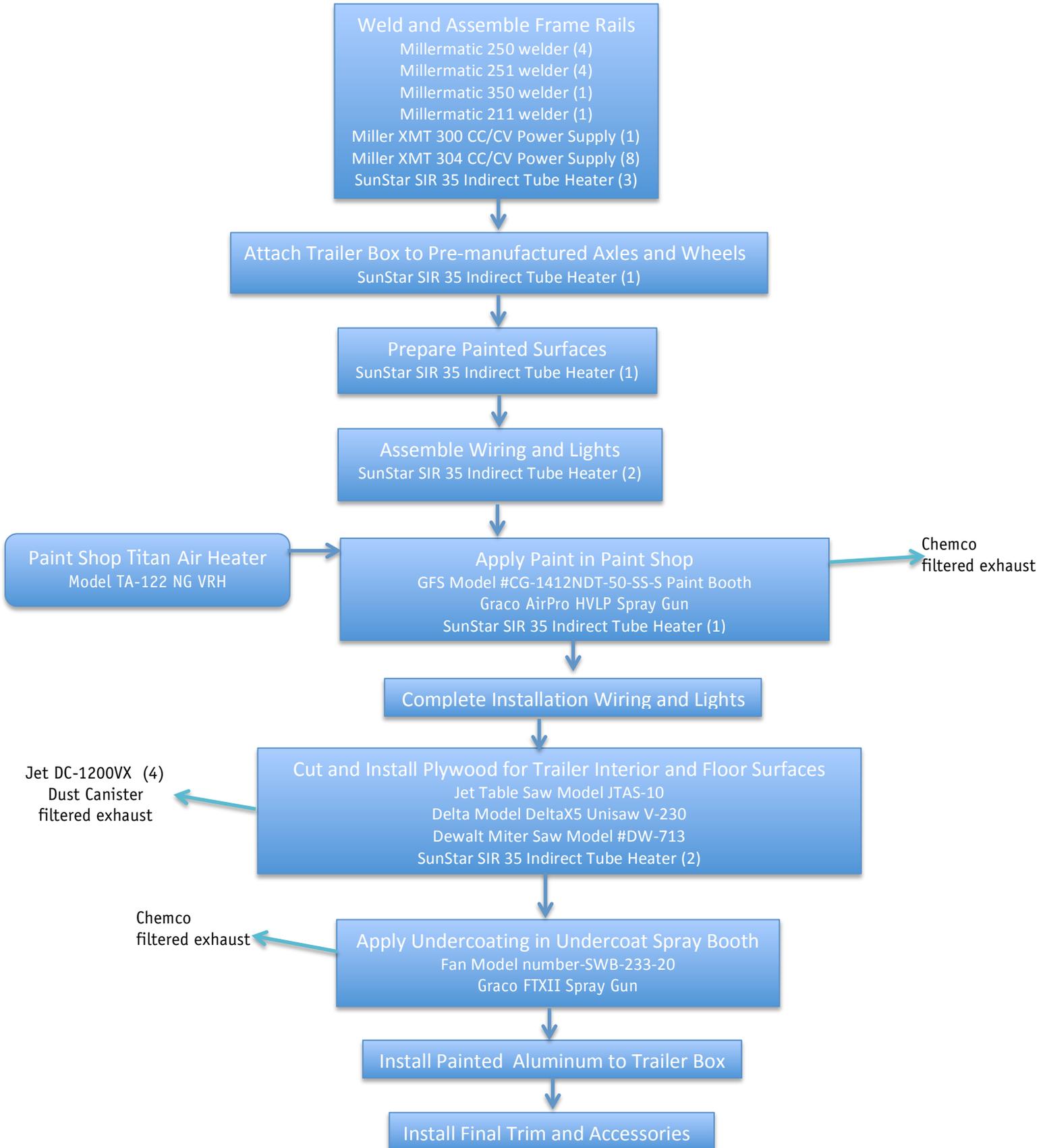
**NOTICE OF INFORMATIONAL MEETING REGARDING PROPOSED NEW MANUFACTURING FACILITY**

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Pub. *date-6-13-16*

# Trailer Manufacturing Process Flow Diagram

Interstate Group, LLC  
605 N. 39<sup>th</sup> Street, Nampa, Idaho



Interstate Group, LLC  
224 Carnation Drive  
Nampa, Idaho 83687

**Equipment List**

**1. Welding**

Unit	Serial No.	Max. Rate Proposed (hrs/yr)	Proposed Process Rate (hrs/yr)	Max. Input Heat Capacity (Btu/hr)	Stack Height (ft. above Ground)	Stack Diameter (Inches)	Stack Gas Flow Rate	Stack Gas Temperature (°F)
<b>Millermatic 250 Portable welders</b>								
1	Not available	8760	2,080	NA	NA	NA	NA	NA
2	Not available	8760	2,080	NA	NA	NA	NA	NA
3	Not available	8760	2,080	NA	NA	NA	NA	NA
4	Not available	8760	2,080	NA	NA	NA	NA	NA
<b>Millermatic 251 Portable welders</b>								
5	Not available	8760	2,080	NA	NA	NA	NA	NA
6	Not available	8760	2,080	NA	NA	NA	NA	NA
7	Not available	8760	2,080	NA	NA	NA	NA	NA
8	Not available	8760	2,080	NA	NA	NA	NA	NA
<b>Millermatic 350P Portable welders</b>								
9	Not available	8760	2,080	NA	NA	NA	NA	NA
<b>Millermatic 211 Autaset Portable welders</b>								
10	Not available	8760	2,080	NA	NA	NA	NA	NA
<b>Miller XMT 300 CC/CV Power Supply With 22A Feeder Box</b>								
11	Not available	8760	2,080	NA	NA	NA	NA	NA
<b>Miller XMT 304 CC/CV Power Supply With 22A Feeder Box</b>								
12	Not available	8760	2,080	NA	NA	NA	NA	NA
13	Not available	8760	2,080	NA	NA	NA	NA	NA
14	Not available	8760	2,080	NA	NA	NA	NA	NA
15	Not available	8760	2,080	NA	NA	NA	NA	NA
16	Not available	8760	2,080	NA	NA	NA	NA	NA
17	Not available	8760	2,080	NA	NA	NA	NA	NA
18	Not available	8760	2,080	NA	NA	NA	NA	NA
19	Not available	8760	2,080	NA	NA	NA	NA	NA
<b>Miller XMT 304 CC/CV Power Supply With S-22A Feeder Box</b>								
20	Not available	8760	2,080	NA	NA	NA	NA	NA
21	Not available	8760	2,080	NA	NA	NA	NA	NA
<b>Indirect Heater – SunStar SIR 35 Indirect Tube</b>								
23	695628	8760	2,080	35,000	25	4	Not available	400
24	695623	8760	2,080	35,000	25	4	Not available	400
25	695626	8760	2,080	35,000	25	4	Not available	400

**Equipment List - Continued**

**2. Preparation Area**

Unit	Serial No.	Max. Rate Proposed (hrs/yr)	Proposed Process Rate (hrs/yr)	Max. Input Heat Capacity (Btu/hr)	Stack Height (ft. above Ground)	Stack Diameter (Inches)	Stack Gas Flow Rate	Stack Gas Temperature (°F)
<b>Indirect Heater – SunStar SIR 35 Indirect Tube</b>								
1	695625	8760	2,080	35,000	25	4	Not available	400

**3. Skin Preparation Area**

Unit	Serial No.	Max. Rate Proposed (hrs/yr)	Proposed Process Rate (hrs/yr)	Max. Input Heat Capacity (Btu/hr)	Stack Height (ft. above Ground)	Stack Diameter (Inches)	Stack Gas Flow Rate	Stack Gas Temperature (°F)
<b>Indirect Heater – SunStar SIR 35 Indirect Tube</b>								
1	695624	8760	2,080	35,000	25	4	Not available	400
2	695622	8760	2,080	35,000	25	4	Not available	400
3	695627	8760	2,080	35,000	25	4	Not available	400

**4. Wood Shop**

Unit	Serial No.	Max. Rate Proposed (hrs/yr)	Proposed Process Rate	Max. Input Heat Capacity (Btu/hr)	Stack Height (ft. above Ground)	Stack Diameter (Inches)	Stack Gas Flow Rate	Stack Gas Temperature (°F)
<b>Jet Table saw -Model JTAS-10, 10" Tilting arbor saw</b>								
1	Not available	8760	2,080	NA	NA	NA	NA	NA
<b>Delta- Model DeltaX5 Unisaw V-230 , 10" Tilting arbor saw</b>								
2	Not available	8760	2,080	NA	NA	NA	NA	NA
<b>Dewalt Miter saw- Model# DW-713 10" Miter saw</b>								
3	Not available	8760	2,080	NA	NA	NA	NA	NA
4	Not available	8760	2,080	NA	NA	NA	NA	NA
<b>Jet DC-1200VX Series Dust Collectors with canister filter</b>								
5	Not available	8760	2,080	NA	NA	NA	NA	NA
6	Not available	8760	2,080	NA	NA	NA	NA	NA
7	Not available	8760	2,080	NA	NA	NA	NA	NA
8	Not available	8760	2,080	NA	NA	NA	NA	NA
<b>Indirect Heater – SunStar SIR 35 Indirect Tube</b>								
9	695628	8760	2,080	35,000	25	4	Not available	400
10	695628	8760	2,080	35,000	25	4	Not available	400

Interstate Group, LLC  
 224 Carnation Drive  
 Nampa, Idaho 83687

**Equipment List - Continued**

**5. Paint Shop**

Unit	Serial No.	Max. Rate Proposed (hrs/yr)	Proposed Process Rate	Max. Input Heat Capacity (Btu/hr)	Stack Height (ft. above Ground)	Stack Diameter (Inches)	Stack Gas Flow Rate	Stack Gas Temp. (°F)
<b>Titan, Model TA-122 NG VRH Make-up Air Heater</b>								
1	16281	8760	2,080	1,925,000	NA	4	1,887 ft. <sup>2</sup> /hr.	80-100
<b>Graco AirPro HVLP Spray Gun, 10 oz./minute</b>								
2	NA	8760	2,080	NA	NA	NA	NA	NA
<b>GFS Model #CG-1412NDT-50-SS-S Spray Booth</b>								
3	NA	8760	2,080	NA	31	34	17,500 ft. <sup>3</sup> /min.	80
<b>Indirect Heater – SunStar SIR 35 Indirect Tube</b>								
4	NA Not on-hand	8760	2,080	35,000	25	4	Not available	400

**6. Undercoat Booth**

Unit	Serial No.	Max. Rate Proposed (hrs/yr)	Proposed Process Rate	Max. Input Heat Capacity (Btu/hr)	Stack Height (ft. above Ground)	Stack Diameter (Inches)	Stack Gas Flow Rate	Stack Gas Temp. (°F)
<b>Undercoat Booth Fan Model number-SWB-233-20</b>								
1	NA	8760	2,080	NA	28 in.	28 in. X 38.5 in.	17,500 ft. <sup>3</sup> /min.	80
<b>Graco Contractor FTX II Spray Gun, Model 246220 and/or 249942</b>								
2	NA	8760	2,080	NA	NA	NA	NA	NA

**Notes**

NA – not applicable

Not Available – manufacturer reports data either NA for not available

Non On-Hand – Equipment ordered but not yet supplied

Interstate Group, LLC  
224 Carnation Drive  
Nampa, Idaho 83687

**Schedule for Construction**

Start Date:	July 16th 2016
Application for Construction Permits:	Ongoing
Installation Dates:	Following Receipt Construction Permits
Proposed Completion Date:	September 1st 2016

## 2. GENERAL EMISSION UNITS – FORM EU0 DOCUMENTATION

There is one General Emission Unit associated with this PTC application.

### 2.1 2.1 Make-Up Air Unit

Fresh air is supplied to the Paint Shop with a Titan, Model TA-122 NG VRH, Make-up air Unit, MAU1. For cold weather operations, MAU1 includes a direct-fired, natural gas fueled air heater with a design input duty of 1,925,000 Btu per hour. Equipment specification sheets are provided in Appendix A. The combustion gases are emitted with the heated air into the Paint Shop and, ultimately, via the Paint Booth exhaust, EP1. Emissions are estimated at the design capacity of 1.925 MMBtu per hour and at an on-line rating of 100% or 8760 hours per year. The emission calculations are shown below and in Table 2-1.

#### Example Calculation Emissions of PM<sub>2.5</sub> from Combustion Gases

$$\begin{aligned} \text{Max. estimated lbs PM}_{2.5} / \text{hr} &= \text{MMBTU/hr natural gas} / (1020 \text{ MMBTU/MMscf natural gas}) * \\ &\text{emission Factor MMscf natural gas} \\ &= 1.925 \text{ MMBTU/hr} / 1020 * 7.6 \text{ lbs/MMscf} = 0.014 \text{ lbs PM}_{2.5} / \text{hr}. \end{aligned}$$

#### Example Calculation Emissions of Dichlorobenzene (585 TAP) from Combustion Gases

$$\begin{aligned} \text{Max. estimated lbs Dichlorobenzene /hr} &= \text{MMBTU /hr natural gas} / (1020 \text{ MMBTU /MMscf} \\ &\text{natural gas}) * \text{emission Factor MMscf natural gas} * (\text{hrs. operation/day}) / (24 \text{ hrs/day.}) \\ &= 1.925 \text{ MMBTU/hr} / 1020 * 1.20\text{E-}3 \text{ lbs/MMscf} * 24 \text{ hrs/yr.} / (24 \text{ hrs/day}) \\ &= 2.26\text{E-}6 \text{ lbs Dichlorobenzene /hr}. \end{aligned}$$

#### Example Calculation Emissions of Benzene (586 TAP and HAP) from Combustion Gases

$$\begin{aligned} \text{Max. estimated lbs Benzene /hr} &= \text{MMBTu/hr natural gas} / (1020 \text{ MMBTu/MMscf natural gas}) * \\ &\text{emission Factor MMscf natural gas} * (\text{hrs. operation/yr.}) / (8760 \text{ hrs/yr.}) \\ &= 1.925 \text{ MBTU/hr} / 1020 * 2.1\text{E-}3 \text{ lbs/MMscf} * 8760 \text{ hrs/yr.} / (8760 \text{ hrs/yr.}) \\ &= 3.96\text{E-}6 \text{ lbs Benzene /hr}. \end{aligned}$$

### 2.2 Room (Unit) Heaters (UH1-UH10)

For cold weather operations, 10 indirect fired, SunRay model SIR-35, natural gas-fired, unit heaters are located at the facility. Each of the units has a design input duty of 35,000 Btu per hour. Equipment specification sheets are provided in Appendix A. The combustion gases are emitted through the roof. Emissions are estimated at the design capacity of 1.925 MMBtu per hour and at an on-line rating of 100% or 8760 hours per year. The emission calculations are

**Table 2-1: MAU1 Combustion Emissions**

<b>Modification Sources</b> Both Air Heater	<b>No. of units</b> 1	<b>Input Duty</b> MMBtu/hr 1.925	<b>MMBtu/hr</b> 1.925 MMBtu/hr	Emissions apportioned among paint room stacks
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**MakeUp Air Heater Duty =**

**1.925 MMBtu/hr ÷ 1,020 MMBtu/MMscf = 1.89E-03 MMscf/hr**

**Fuel Use:**

Operating Assumptions:

**24 hr/day**  
**8,760 hr/yr<sup>3</sup>**

**0.045 MMscf/day**  
**16.532 MMscf/year**

Criteria Air Pollutants	Emission Factor <sup>1</sup>	Emissions	
		lb/MMscf	T/yr
NO <sub>2</sub>	100	0.19	0.83
CO	84	0.16	0.69
PM <sub>10</sub>	7.6	0.014	0.06
PM <sub>2.5</sub>	7.6	0.014	0.06
SO <sub>2</sub>	0.6	1.1E-03	5.0E-03
VOC	5.5	1.0E-02	4.5E-02
Lead	0.0005	9.4E-07	4.1E-06
		6.8E-04	lb/month
<b>Total Criteria Emissions (ton/yr) =</b>		<b>1.63</b>	

Hazardous & Toxic Air Pollutants (HAP & TAP)	Emission Factor <sup>1</sup>	Emissions		Modeling Threshold TAP Screening Emission Level	Modeling Required?
		lb/MMscf	lb/hr <sup>2</sup>		
<b>PAH HAPs</b>					
2-Methylnaphthalene	2.40E-05	<b>4.53E-08</b>	2.0E-07	9.1E-05 lb/hr	No
3-Methylchloranthrene	1.80E-06	<b>3.40E-09</b>	1.5E-08	2.5E-06 lb/hr	No
Acenaphthene	1.80E-06	<b>3.40E-09</b>	1.5E-08	9.1E-05 lb/hr	No
Acenaphthylene	1.80E-06	<b>3.40E-09</b>	1.5E-08	9.1E-05 lb/hr	No
Anthracene	2.40E-06	<b>4.53E-09</b>	2.0E-08	9.1E-05 lb/hr	No
Benzo(a)anthracene	1.80E-06	<b>3.40E-09</b>	1.5E-08		See POM
Benzo(a)pyrene	1.20E-06	<b>2.26E-09</b>	9.9E-09	2.0E-06 lb/hr	See POM
Benzo(b)fluoranthene	1.80E-06	<b>3.40E-09</b>	1.5E-08		See POM
Benzo(g,h,i)perylene	1.20E-06	<b>2.26E-09</b>	9.9E-09	9.1E-05 lb/hr	No
Benzo(k)fluoranthene	1.80E-06	<b>3.40E-09</b>	1.5E-08		See POM
Chrysene	1.80E-06	<b>3.40E-09</b>	1.5E-08		See POM
Dibenzo(a,h)anthracene	1.20E-06	<b>2.26E-09</b>	9.9E-09		See POM
Fluoranthene	3.00E-06	<b>5.66E-09</b>	2.5E-08	9.1E-05 lb/hr	No
Fluorene	2.80E-06	<b>5.28E-09</b>	2.3E-08	9.1E-05 lb/hr	No
Indeno(1,2,3-cd)pyrene	1.80E-06	<b>3.40E-09</b>	1.5E-08		See POM
Naphthalene	6.10E-04	1.15E-06	5.0E-06	3.33 lb/hr	No
Phenanthrene	1.70E-05	<b>3.21E-08</b>	1.4E-07	9.1E-05 lb/hr	No
Pyrene	5.00E-06	<b>9.44E-09</b>	4.1E-08	9.1E-05 lb/hr	No
Polycyclic Org. Matter (POM, 7-PAH Group)		<b>2.15E-08</b>	<b>9.4E-08</b>	2.0E-06 lb/hr	No
<b>Non-PAH HAPs</b>					
Benzene	2.10E-03	<b>3.96E-06</b>	1.7E-05	8.0E-04 lb/hr	No
Dichlorobenzene	1.20E-03	2.26E-06	9.9E-06	20 lb/hr	No
Formaldehyde	7.50E-02	<b>1.42E-04</b>	6.2E-04	5.1E-04 lb/hr	No
Hexane	1.80E+00	3.40E-03	1.5E-02	12 lb/hr	No
Toluene	3.40E-03	6.42E-06	2.8E-05	25 lb/hr	No
<b>Non-HAP Organic Compounds</b>					
Pentane	2.60E+00	4.91E-03	2.1E-02	118 lb/hr	No
<b>Metals (HAPs)</b>					
Arsenic	2.00E-04	<b>3.77E-07</b>	1.7E-06	1.5E-06 lb/hr	No
Barium	4.40E-03	8.30E-06	3.6E-05	0.033 lb/hr	No
Beryllium	1.20E-05	<b>2.26E-08</b>	9.9E-08	2.8E-05 lb/hr	No
Cadmium	1.10E-03	<b>2.08E-06</b>	9.1E-06	3.7E-06 lb/hr	No
Chromium	1.40E-03	2.64E-06	1.2E-05	0.033 lb/hr	No
Cobalt	8.40E-05	1.59E-07	6.9E-07	0.0033 lb/hr	No
Manganese	3.80E-04	7.17E-07	3.1E-06	0.067 lb/hr	No
Mercury	2.60E-04	4.91E-07	2.1E-06	0.003 lb/hr	No
Nickel	2.10E-03	<b>3.96E-06</b>	1.7E-05	2.7E-05 lb/hr	No
Selenium	2.40E-05	4.53E-08	2.0E-07	0.013 lb/hr	No
<b>Non-HAP Metals</b>					
Copper	8.50E-04	1.60E-06	7.0E-06	0.013 lb/hr	No
Molybdenum	1.10E-03	2.08E-06	9.1E-06	0.333 lb/hr	No
Vanadium	2.30E-03	4.34E-06	1.9E-05	0.003 lb/hr	No
Zinc	2.90E-02	5.47E-05	2.4E-04	0.667 lb/hr	No
<b>Total HAP Emissions (ton/yr) =</b>		<b>0.02</b>			

Notes:

1. Emission factors taken from AP-42, Section 1.4 *Natural Gas Combustion* (7/98)
2. HAPs lb/hr emissions that are not TAPs are annual averages.
3. TAPs lb/hr emissions are 24-hour averages unless shown in bold. Bold emissions are annual averages for carcinogens.
4. Booth Make-up Air heater is used only during cold weather, so actual on-line rating is significantly less.
5. Polycyclic Organic Matter (POM) is considered as one TAP comprised of: benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, chrysene, indeno(1,2,3-cd)pyrene, benzo(a)pyrene. The total is compared to benzo(a)pyrene.

**Table 2-2: Indirect Heater Natural Gas Combustion Emissions**

Heater Combustion Source	No. of units	Input Duty Btu/hr	MMBtu/hr	Emission Points
SunStar Natural Gas Heater Infrared Vacuum Compact U- Tube	10	35000	0.35 MMBtu/hr	

**Office & Warehouse Indirect Air Heater Duty =**  
**0.35 MMBtu/hr** ÷ 1,020 MMBtu/MMscf = **3.43E-04 MMscf/hr** **Fuel Use:**  
 Operating Assumptions: **24 hr/day** **0.008 MMscf/day**  
**8,760 hr/yr<sup>3</sup>** **3.006 MMscf/year**

Criteria Air Pollutants	Emission Factor <sup>1</sup>	Emissions	
		lb/MMscf	T/yr
NO <sub>2</sub>	94	0.0323	0.14
CO	40	0.01	0.06
PM <sub>10</sub>	7.6	0.0026	0.01
PM <sub>2.5</sub>	7.6	0.003	0.01
SO <sub>2</sub>	0.6	2.1E-04	9.0E-04
VOC	5.5	1.9E-03	8.3E-03
Lead	0.0005	1.7E-07	7.5E-07
		1.2E-04	lb/month
<b>Total Criteria Emissions (ton/yr) =</b>		<b>0.22</b>	

Hazardous & Toxic Air Pollutants (HAP & TAP)	Emission Factor <sup>1</sup>	Emissions		Modeling Threshold TAP Screening Emission Level	Modeling Required?
		lb/MMscf	T/yr		
<b>PAH HAPs</b>					
2-Methylnaphthalene	2.40E-05	<b>8.24E-09</b>	3.6E-08	9.1E-05 lb/hr	No
3-Methylchloranthrene	1.80E-06	<b>6.18E-10</b>	2.7E-09	2.5E-06 lb/hr	No
Acenaphthene	1.80E-06	<b>6.18E-10</b>	2.7E-09	9.1E-05 lb/hr	No
Acenaphthylene	1.80E-06	<b>6.18E-10</b>	2.7E-09	9.1E-05 lb/hr	No
Anthracene	2.40E-06	<b>8.24E-10</b>	3.6E-09	9.1E-05 lb/hr	No
Benzo(a)anthracene	1.80E-06	<b>6.18E-10</b>	2.7E-09		See POM
Benzo(a)pyrene	1.20E-06	<b>4.12E-10</b>	1.8E-09	2.0E-06 lb/hr	See POM
Benzo(b)fluoranthene	1.80E-06	<b>6.18E-10</b>	2.7E-09		See POM
Benzo(g,h,i)perylene	1.20E-06	<b>4.12E-10</b>	1.8E-09	9.1E-05 lb/hr	No
Benzo(k)fluoranthene	1.80E-06	<b>6.18E-10</b>	2.7E-09		See POM
Chrysene	1.80E-06	<b>6.18E-10</b>	2.7E-09		See POM
Dibenzo(a,h)anthracene	1.20E-06	<b>4.12E-10</b>	1.8E-09		See POM
Fluoranthene	3.00E-06	<b>1.03E-09</b>	4.5E-09	9.1E-05 lb/hr	No
Fluorene	2.80E-06	<b>9.61E-10</b>	4.2E-09	9.1E-05 lb/hr	No
Indeno(1,2,3-cd)pyrene	1.80E-06	<b>6.18E-10</b>	2.7E-09		See POM
Naphthalene	6.10E-04	2.09E-07	9.2E-07	3.33 lb/hr	No
Phenanthrene	1.70E-05	<b>5.83E-09</b>	2.6E-08	9.1E-05 lb/hr	No
Pyrene	5.00E-06	<b>1.72E-09</b>	7.5E-09	9.1E-05 lb/hr	No
Polycyclic Org. Matter (POM, 7-PAH Group)		<b>3.91E-09</b>	<b>1.7E-08</b>	2.0E-06 lb/hr	No
<b>Non-PAH HAPs</b>					
Benzene	2.10E-03	<b>7.21E-07</b>	3.2E-06	8.0E-04 lb/hr	No
Dichlorobenzene	1.20E-03	4.12E-07	1.8E-06	20 lb/hr	No
Formaldehyde	7.50E-02	<b>2.57E-05</b>	1.1E-04	5.1E-04 lb/hr	No
Hexane	1.80E+00	6.18E-04	2.7E-03	12 lb/hr	No
Toluene	3.40E-03	1.17E-06	5.1E-06	25 lb/hr	No
<b>Non-HAP Organic Compounds</b>					
Pentane	2.60E+00	8.92E-04	3.9E-03	118 lb/hr	No
<b>Metals (HAPs)</b>					
Arsenic	2.00E-04	<b>6.86E-08</b>	3.0E-07	1.5E-06 lb/hr	No
Barium	4.40E-03	1.51E-06	6.6E-06	0.033 lb/hr	No
Beryllium	1.20E-05	<b>4.12E-09</b>	1.8E-08	2.8E-05 lb/hr	No
Cadmium	1.10E-03	<b>3.77E-07</b>	1.7E-06	3.7E-06 lb/hr	No
Chromium	1.40E-03	4.80E-07	2.1E-06	0.033 lb/hr	No
Cobalt	8.40E-05	2.88E-08	1.3E-07	0.0033 lb/hr	No
Manganese	3.80E-04	1.30E-07	5.7E-07	0.067 lb/hr	No
Mercury	2.60E-04	8.92E-08	3.9E-07	0.003 lb/hr	No
Nickel	2.10E-03	<b>7.21E-07</b>	3.2E-06	2.7E-05 lb/hr	No
Selenium	2.40E-05	8.24E-09	3.6E-08	0.013 lb/hr	No
<b>Non-HAP Metals</b>					
Copper	8.50E-04	2.92E-07	1.3E-06	0.013 lb/hr	No
Molybdenum	1.10E-03	3.77E-07	1.7E-06	0.333 lb/hr	No
Vanadium	2.30E-03	7.89E-07	3.5E-06	0.003 lb/hr	No
Zinc	2.90E-02	9.95E-06	4.4E-05	0.667 lb/hr	No
<b>Total HAP Emissions (ton/yr) =</b>		<b>0.003</b>			

- Notes:
- Emission factors taken from AP-42, Section 1.4 *Natural Gas Combustion* (7/98)
  - HAPs lb/hr emissions that are not TAPs are annual averages.
  - TAPs lb/hr emissions are 24-hour averages unless shown in bold. Bold emissions are annual averages for carcinogens.
  - Booth Make-up Air heater is used only during cold weather, so actual on-line rating is significantly less.
  - Polycyclic Organic Matter (POM) is considered as one TAP comprised of: benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, chrysene, indeno(1,2,3-cd)pyrene, benzo(a)pyrene. The total is compared to benzo(a)pyrene.

### 2.3 Wood Cutting

Wood cutting will be performed at various machines in the existing building. Emissions will be controlled at 2 Jet DC 1200VX dust filters equipped with filter canisters and vented into the room. The canister control efficiencies are rated at 86% efficient for 1-micron particles. Current wood cutting production is estimated to be a maximum of 40,000 feet per month. For the purposes of estimating emissions at projected maximum production rates, 60,000 ft. per month is used. Interstate estimates that 60 gallons of sawdust and shavings are generated per 600 feet cut. Applying Interstate's measured volume of wood shavings and sawdust collected (60 gal./600 feet cut), density of sawdust (14.8 lbs./cubic feet), and the estimated fine particulate fraction of sawdust (1.86%), 221 lbs/month of fine particulate is estimated. Assuming the fine particulate is PM<sub>2.5</sub>, applying the control efficiency 86% and the estimated hours of operation per month (estimated 10 hours per day, 4 days per week, 4 weeks per month, 0.08 lbs. PM<sub>10/2.5</sub> per hour is estimated. Assuming operations 52 weeks per year, 0.19 tons PM<sub>10/2.5</sub> per year is estimated. The emission calculations are shown below and in Table 2-3.

$$\begin{aligned} \text{lbs. PM}_{10/2.5} \text{ generated/month} &= \text{wood ft. cut/month} * \text{gals. wood shaving \&} \\ &\text{sawdust/ft. cut} * \text{volume wood shaving \& sawdust} * \text{density sawdust} * \% \text{ fine} \\ &\text{particulate} \\ &= 60,000 \text{ ft. cut/month} * 60 \text{ gals./600 ft. cut} * 0.134 \text{ ft}^3/\text{gal.} * 14.8 \text{ lbs./ft.}^3 * \\ &1.86\% \text{ fine particulate} = 221 \text{ lbs. PM}_{10/2.5} \text{ generated/month} \end{aligned}$$

$$\begin{aligned} \text{lbs. PM}_{10/2.5} \text{ emitted/hr} &= (1 - \text{Control efficiency}) * \text{wood dust PM}_{10/2.5} \text{ lbs.} \\ &\text{generated/month} * 1 \text{ month/4 weeks} * 1 \text{ week/4 days} * 1 \text{ day/ 24 hrs} \\ &= (100\% - 86\%) * 221 \text{ lbs. PM}_{10/2.5}/\text{month} * 1 \text{ month/4 weeks} * 1 \text{ week/4 days} * \\ &1 \text{ day/ 24 hrs} = 0.08 \text{ lbs. PM}_{10/2.5} \text{ emitted/hr} \end{aligned}$$

$$\begin{aligned} \text{tons PM}_{10/2.5} \text{ emitted/year} &= (100\% - 86\%) * 221 \text{ lbs. generated/month} * 12 \text{ mo./year} * \\ &1 \text{ ton/2000 lbs.} = 0.19 \text{ tons PM}_{10/2.5} \text{ emitted year} \end{aligned}$$

### 2.4 Welding

Welding will be performed at various stations in the existing building to assemble rails, doors, and trailer frames. Welding is Gas Metal Arc Welding (GMAW) using carbon steel wire, classified as ER70S-6. Material specifications and a Test Report for the wire are included in Appendix A. Emissions are estimated using the emission factors included in San Diego Air Pollution Control District Welding Operations Guidance and the fume correction factors supplied by NASSCO,

updated October 1998.<sup>4</sup>

Emission calculations and the hierarchy of SDAPCD welding emission factors are shown below and in Table 2-4.

Example Calculation Copper (585 TAP) in ER70S-6

Max. estimated Copper Emission lbs./yr. = lbs/yr. E70S-3 \* % copper \* fume emission factor  
\* Fume correction factor  
= 29250 lbs/yr. \* 0.15% copper \* 1 % fume emission factor \* 0.5464 fume correction factor  
= 0.24 lbs/yr  
Max. estimated Copper Emission lbs./hr. = 0.24 lbs/yr / (208 days \* 24 hrs) = 4.8 E-5 lbs./hr.

Example Calculation Nickel (586 TAP) in E70S-3

Max. estimated nickel lbs./yr. = lbs/yr. ER70S-6 \* % nickel \* fume emission factor  
\* Fume correction factor  
= 29250 lbs/yr. \* 0.01% nickel \* 1% fume emission factor \* 0.5464 Fume correction factor  
= 0.016 lbs./yr.  
Max. estimated Nickel Emission lbs./hr. = 1.6E-2 lbs/yr / (8760 hrs) = 1.82E-6 lbs./hr.

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<sup>4</sup> [http://www.sandiegocounty.gov/content/dam/sdc/apcd/PDF/Misc/EFT/Welding/APCD\\_SMAW\\_E6013.pdf](http://www.sandiegocounty.gov/content/dam/sdc/apcd/PDF/Misc/EFT/Welding/APCD_SMAW_E6013.pdf)

**Table 2-3: Wood Cutting Emissions**

Estimated Max. Monthly Wood Cutting (feet/month)	Volume Wood Shavings (gals./ft. cut) <sup>1</sup>	Volume Wood Shavings (ft. <sup>3</sup> shavings./ft. cut)	Density of Sawdust (lbs./ft. <sup>3</sup> ) <sup>2,3</sup>	Fine Particulate Fraction <sup>4</sup>	PM <sub>10/2.5</sub> (lbs./month)	Control Efficiency Canister Dust Filter (%)	PM <sub>10/2.5</sub> Emitted (lbs./month)	PM <sub>10/2.5</sub> Emitted (lbs./hr)	PM <sub>10/2.5</sub> Emitted (tons./yr)
60,000	0.1	0.0134	14.8	1.86%	221	86%	31	0.08	0.19

**Sawdust PM Calculations**

lbs. PM<sub>10/2.5</sub> generated/month = wood ft. cut/month \* gals. wood shaving & sawdust/ft. cut \* volume wood shaving & sawdust \* density sawdust \* % fine particulate  
= 80,000 ft. cut/month \* 60 gals./ft. cut \* 0.134 ft<sup>3</sup>/gal. \* 14.8 lbs./ft.<sup>3</sup> \* 1.86% fine particulate = 295 lbs. PM<sub>10/2.5</sub> generated/month

lbs. PM<sub>10/2.5</sub> emitted/hr = (1-Control efficiency) \* wood dust PM<sub>10/2.5</sub> lbs. generated/month \* 1 month/4 weeks \* 1 week/4 days \* 1 day/ 24 hrs  
= (1-86%) \* 221 lbs. PM<sub>10/2.5</sub>/month \* 1 month/4 weeks \* 1 week/4 days \* 1 day/ 24 hrs = 0.08 lbs. PM<sub>10/2.5</sub> emitted/hr

tons PM<sub>10/2.5</sub> emitted year = lbs. PM<sub>10/month</sub> \* (1-Control Efficiency) \* 12 months/year \* 1 ton/2000 lbs. = 495.6 lbs. PM<sub>10/2.5</sub> emitted year

tons PM<sub>10/2.5</sub> emitted year = 221 lbs. PM<sub>10/2.5</sub> emitted/yr \* 1 ton/2000 lbs. = .19 tons PM<sub>10/2.5</sub> emitted year

**References**

1. Volume of wood dust shavings generated provided by Richard Asbell, Interstate Group, Email June 2, 2016.
2. Vítěz T., Trávníček P., *Particle size distribution of sawdust and wood shavings mixtures*, Res. Agr. Eng., 56: 154-158, www.agriculturejournals.cz/publicFiles/31258.pd, 2010.
3. Density of sawdust greater than shavings + sawdust. Therefore, using density of sawdust is conservative.
4. Robert Harris and Douglas Phillips, *Density of Select Hardwood Fuels*, Georgia Forest Research Paper, No. 61, <http://www.gfc.state.ga.us/resources/publications/research-papers/gfrp61.pdf>, February 1986.



### 3. SPRAY PAINT BOOTHS – FORM EU3 DOCUMENTATION

There is one totally enclosed spray booth and one partially enclosed spray booth associated with this facility. The totally enclosed spray booth will be located in a new building at the site. The partially enclosed spray booth will be located outside.

#### 3.1 Totally Enclosed Spray Booth

The first spray booth, PB1, is used to paint metal and wood. The booth will be a GFS, Model CDG, 1412NDT-50-SS-S, approximately 15 feet in width, 13 feet high and 50 feet in length. Interior panels are 18-gauge galvanized steel. Product will enter and exist via separate 10 feet wide by 10 feet length bi-fold doors. The booth will be equipped with 2 personnel doors, 2.5 feet wide by 5.9 feet tall.

Clean air will be drawn in through filters in the doors at the front of the booth and exhausted out the filters at the rear of the booth. A 34-inch, 16,800 CFM exhaust fan will draw air through the spray booth and exhaust filters, discharging at a 34-inch diameter stack. In addition to emissions from these coating activities, airflow through the exhaust stack carries the combustion emissions from MAU1.

Paint is applied using a high volume, low pressure, (HVLP) Graco AirPro spray gun. Although the manufacture estimates transfer efficiency to be 70-80%, emissions calculations conservatively apply a rating of 65%.

Chemco fiberglass exhaust filters (36), 20 inches by 20 inches, 2 inches thick are mounted on the side-wall. According to test data, the filter media have an average removal efficiency of 98.95%. For the purposes of estimating emissions, 98.65% control efficiency is used. Equipment specifications for the booth and particulate control filters are included in Appendix B.

#### Coating Usage

Interstate applies several paints. Specific materials, maximum potential monthly use amounts, and physical and chemical characteristics are listed in Table 3-1. Safety Data Sheets (SDS) showing the physical and chemical characteristics are included in Appendix A.

Maximum potential coating particulate and TAP/HAP constituents are calculated as follows:

Max Hourly PM/TAP/HAP =

= gal/month \* density \* wt% solids/TAP/HAP \* 1 month/4 weeks \* 1 week/4 days \* 1 day/24 hrs



Example Max Hourly for ethylbenzene in Quad Sealant Advanced Grey/Black  
= 100 gal/month \* 10.84 lb/gal density \* 1.0 wt% ethylbenzene in Quad Grey/Black  
\* 1 month/4 weeks \* 1 week/4 days \* 1 day/24 hrs.  
= 0.028 lb/hr Ethylbenzene in Quad Grey/Black

Max 12-month tons/year PM/HAP/TAP =  
= gals./month \* 10.84 lb/gal density \* wt% solids/TAP/HAP \* 12 months/year / (pounds/ton)

Example Max 12-month Ethylbenzene in Quad Sealant Advanced Grey/Black  
100 gals./month \* 10.84 lb/gal density \* 1% Ethylbenzene in Quad Grey/Black \* 12 months/yr.  
=130.1 lbs/year Ethylbenzene in Quad Grey/Black  
130.1 lbs/year Ethylbenzene in Quad Grey/Black / (2000 lbs./ton) =  
= 0.07 tons/year Ethylbenzene in Quad Grey/Black

#### Estimated Maximum Coating Emissions

The emissions are based on estimated maximum monthly paint use. Volatile emissions are assumed to be completely emitted. As described above, uncontrolled non-volatile emissions are estimated using a transfer efficiency of 65%. Particulate content in the coatings is estimated by multiplying the maximum solids content of the coatings as provided on the SDS by the coating usage rate. All particulate is conservatively assumed to have a diameter equal to or less than 2.5 microns (PM<sub>2.5</sub>). Uncontrolled and controlled emission rates of the cumulative PM<sub>2.5</sub> content are calculated as described above for non-volatile components. Controlled emissions of particulates are estimated using a filter efficiency of 98.65%. As described above, emissions of VOCs are assumed to be completely emitted and not controlled. Estimated emissions of coating particulates and VOCs are shown in Table 3-2. Estimated emissions of coating TAPs are shown in Table 4-4. Estimated emissions of coating HAPs are shown in Table 4-6.

Maximum potential coating PM emissions are calculated as follows:

Max. hourly or yearly spray rate lbs./hr. or tons/year \* (100%-spray retention rate%)  
\* (100%-filter efficiency%) =  
= controlled lbs./hr. or tons/year

Example PM<sub>10</sub> lbs./hr. calculation:

maximum total paint solids 18.6 lbs./hr. \* (100%-65%) \* 98.65% = 0.088 lbs. PM<sub>10</sub>/hr.

Example PM<sub>10</sub> ton/year calculation:

maximum total paint solids 42.87 tons./yr. \* (100%-65%) \* 98.65% = 0.2 tons PM<sub>10</sub>/year

Maximum potential coating non volatile TAP and HAP emissions are calculated as follows:

Max. hourly or yearly spray rate lbs./hr. or tons/year \* (100%-spray retention rate%)  
= uncontrolled lbs./hr. or tons/year



Example Max Hourly for calcium carbonate in Quad Sealant Advanced Grey/Black  
maximum total calcium carbonate 1.1 lbs./hr. \* (100%-65%) = 0.385 lbs. calcium carbonate/hr.

Maximum potential coating volatile TAP and HAP emissions are calculated as follows:  
Max. hourly or yearly spray rate lbs./hr. = uncontrolled lbs per hr. or tons/year

Example Max hourly for xylene in Quad Sealant Advanced Grey/Black  
maximum total xylene 0.092 lbs./hr. = 0.092 lbs. xylene/hr.

Example Max yearly for xylene in Quad Sealant Advanced Grey/Black  
maximum total xylene 0.21 tons/year = 0.21 tons xylene/yr.

### **3.2 Partially Enclosed Spray Booth**

The second spray booth, PB2, is a three-sided enclosure with a vinyl strip door at the fourth side. This booth is used for the application of undercoating.

Undercoating is applied using a Graco II FTX II spray gun with an airless sprayer. Transfer efficiency is conservatively estimated to be 40%.

Chemco fiberglass exhaust filters are mounted on the side-wall. According to test data, the filter media have an average removal efficiency of 98.95%. For the purposes of estimating emissions, the 96% efficiency of air handling and the control the filters listed in the existing Permit to Construct (PTC No. P-2013.0043) for the partially enclosed booth at Carnation Drive, Nampa is applied.

#### Coating Usage

Interstate applies one type of coating in the partially enclosed booth, Z Guard 1021FRX. Maximum potential monthly use amounts, and physical and chemical characteristics are listed in Table 3-3. A Safety Data Sheet (SDS) showing the physical and chemical characteristics is included in Appendix A.

Maximum potential coating particulate and TAP/HAP constituents are calculated as described in Section 3.1 above.

#### Estimated Maximum Coating Emissions

The emissions are based on estimated maximum monthly paint use. Volatile emissions are assumed to be completely emitted. As described above, uncontrolled non-volatile emissions are estimated using a transfer efficiency of 40%. Particulate content in the coating is estimated by multiplying the maximum solids content of the coatings as provided on the SDS by the coating usage rate. All particulate is conservatively assumed to have a diameter less than or equal to 2.5 microns (PM<sub>2.5</sub>). Uncontrolled and controlled emission rates of the cumulative PM<sub>2.5</sub> content are calculated as

described above for non-volatile components. Controlled emissions of particulates are estimated using a filter efficiency of 98.6%. As described above, emissions of VOCs are assumed to be completely emitted and not controlled. Estimated emissions of coating particulates and VOCs are shown in Table 3-4. Estimated emissions of coating TAPs are shown in Table 4-5. Estimated emissions of coating HAPs are shown in Table 4-6.

Maximum potential coating PM, VOC, non volatile TAP and HAP, and volatile TAP and HAP emissions are calculated as described in Section 3.1 above.

### **3.3 Proposed Permit Limits**

Limits for the paint booth make-up air heater are not proposed since the emissions on a 24-hour, 365 days/year, operational basis do not contribute to an exceedance of criteria pollutant BRC thresholds. TAP screening emission thresholds or major HAP thresholds, and actual use is expected to be considerably less.

Limits for the unit air heaters are not proposed since the units are used for indirect heating, the units are supplied by natural gas, the maximum capacities are less than 50 million Btu's per hour input, and the units qualify as permit-exempt sources (IDAPA 58.01.01.222c).

Limits for the wood cutting and resulting PM emissions are not proposed since estimated emissions do not contribute to an exceedance of criteria pollutant BRC thresholds.

Limits for the welding wire and resulting emissions are not proposed since estimated emissions at more than 190% of the maximum potential production levels in the last 2 years and more than 160% of the maximum potential production in the current year do not contribute to an exceedance of criteria pollutant BRC thresholds, TAP screening emission thresholds or major HAP thresholds.

Limits for the proposed monthly use of various coatings are shown in Table 3-1, below. These monthly limits are based on the existing Permit to Construct (P-2-13.0043) for the existing facility and consideration of current paint products and potential maximum use amounts. The maximum estimated monthly production amounts at the paint booth are more than 500% of the past maximum monthly production amounts at the current facility and maximum estimated monthly production amounts at the undercoating booth are more than 240% of the past maximum monthly production amounts at the current facility. Annual limits are unnecessary since adherence to the monthly limits will assure compliance with annual limits for VOCs, TAPs and HAPs. The proposed permit limits conservatively assume worst-case daily emissions for 208 days a year and estimated emissions do not exceed criteria BRC, TAP screening emission levels or Major HAP thresholds.

Table 3-1 Interstate Proposed Permit Limits

Product	Maximum Monthly Use Rate (gallons)
Quad Sealant Advanced Grey/Black	65
Quad Sealant Clear	50
Quad Sealant White	50
Black Spray	50
Silver Spray	50
Touch-Up Paint	50
Interior Wall Paint/Floor Paint	40
Adhesive White/Black	100
Almond - LOS PSS 10.00Z ACWS ALM 12CC	50
Silicone (Project 1)	50
Xylene	50
Mineral Spirits	50
9900 Paint	250
9970 Primer	50
AeroGreen Paint Prep	50
Acetone	10
Black Paint (Kem 400)	250
Gray Primer	10
Z Guard 1021FRX (Undercoat)	350

It is proposed that Interstate shall retain the ability to apply future new coatings or future new welding rod or increase the TAPs associated with current coatings or welding rod on an individual basis as they are introduced into production. They shall be evaluated with the following equations for the maximum amounts that could be applied such that the uncontrolled emissions would be less than or equal to TAP screening emission limits. The equations are consistent with TAP compliance (Section 210) and exemption requirements (Section 223). A future coating would be one that Interstate begins using that does not appear on the list of current coatings.

Using the purchase records, SDSs, and material usage records, the permittee shall monitor and record the individual monthly or hourly TAPs (as specified in IDAPA 58.01.01.585 and 586)



emissions from the tank and structural steel coating process in order to demonstrate compliance with the TAPs emissions limits Permit Condition.

Each individual hourly or monthly volatile 585 TAP emission shall be calculated for each individual coating material as follows:

Hourly TAPs emissions = [Percent TAP #1 content (material #1) ÷ 100 x Density in pounds per gallon (material #1) x daily usage (or monthly use ÷ 20 days) in gallons (material #1) ÷ 24 hours/day]

Each individual hourly or monthly non-volatile 585 TAP emission shall be calculated for each individual coating material as follows:

Hourly 585 TAPs emissions = [[Percent TAP #1 content (material #1) ÷ 100 x Density in pounds per gallon (material #1) x daily usage (or monthly use ÷ 16 days) in gallons (material #1) X (1-Transfer Efficiency%/100) X (1-filter efficiency%/100)] ÷ 24 hours/day]

Each individual hourly volatile 586 TAPs emissions shall be calculated for each individual material as follows:

Hourly 586 TAPs emissions = [Percent TAP #1 content (material #1) ÷ 100 x Density in pounds per gallon (material #1) x yearly usage in gallons (material #1) ÷ 8760 hours/year]

If any of the individual hourly 586 TAPs emissions from an individual material exceed the screening emissions level (EL) specified in IDAPA 58.01.01.585 and 586, a modeling demonstration shall be conducted to demonstrate compliance with the AAC (mg/m<sup>3</sup>) (for TAPs listed in IDAPA 58.01.01.585) or the AACC (µg/m<sup>3</sup>) (for TAPs listed in IDAPA 58.01.01.586).

Each individual hourly non-volatile 586 TAP emissions shall be calculated for each individual material as follows:

Hourly TAPs emissions = [Percent TAP #1 content (material #1) ÷ 100 x Density in pounds per gallon (material #1) x yearly usage in gallons (material #1) x (1-Transfer Efficiency%/100) x (1-filter efficiency%/100) ÷ 8760 hours/year]

If any of the individual hourly 585 TAP or individual hourly 586 TAP emissions limits exceed the screening emissions level (EL) specified in IDAPA 58.01.01.585 and 586, a modeling demonstration shall be conducted to demonstrate compliance with the AAC (mg/m<sup>3</sup>) (for TAPs listed in IDAPA 58.01.01.585) or the AACC (µg/m<sup>3</sup>) (for TAPs listed in IDAPA 58.01.01.586).

Note: If the SDS for a material lists a range for a specific TAP content, then this calculation shall use the highest value in the range.

Table 3-2: Paint Analysis

MAX Monthly Use 2015	Included in PTC Application monthly use	Manufacturer	Coating Material	Density	Solids	VOC (non-exempt)	Acetone	MEK	Naphthalene	1,2,4-Trimethylbenzene	Ethylbenzene	Methyl n-Propyl Ketone	Methyl Isobutyl Ketone	Toluene	2-Butoxyethyl Acetate	n-Butyl Acetate	Tertiary Butyl Acetate	Zinc Oxide		
																			CAS No.	Weight Percentage Content
				lbs./gal.	Weight Percentage Content	Weight Percentage Content	Weight Percentage Content													
17.7	100	Henkel	Quad Sealant Advanced Grey/Black	10.84	76%	1.49%					1.0%									
6.3	50	Henkel	Quad Sealant Clear	7.73	75%	35.00%			1%		10.0%									
6	50	Henkel	Quad Sealant White	10.84	76%	3.90%					1.0%									
3.4	50	Walmart	Black Spray	5.80	38%	61.92%	29.00%			1.00%				14.00%						
0.4	50	Rust-Oleum	Silver Spray	6.16	28%	72.00%	25.00%				1.00%			50.00%						
0	50	Sherwin Williams	Touch-Up Paint	9.10	53%	47.00%					5.00%			10.00%	4.00%	15.00%				
0	40	Columbia	Interior Wall Paint/Floor Paint	9.90	97%	2.90%												2.00%		
19.96	100	LaVanture Products	Adhesive White/Black	12.29	99%	1.20%														
26.2	100	Henkel	Almond - LOS PSS 10.00Z ACWS ALM 12CC	14.0946	62%	1.50%														
4.89	50	Hi-Tech Industries	Silicone (Project 1)	8.01	65%	3.00%														
0	50	Sherwin Williams	Xylene	7.18	0%	100.00%					30.00%									
4	50	Sherwin Williams	Mineral Spirits	6.4218	0%	100.00%														
120	250	Asphalt Co.	9900 Paint	8.56518	45%	36.00%		2.00%					2.00%							
2.75	50	Asphalt Co.	9970 Primer	8.56518	75%	35.00%		2.00%					2.00%							
10.2	50	Hi-Lite Solutions	AeroGreen Paint Prep	8.45	97%	3.00%														
0.25	10	Sherwin Williams	Acetone	6.59	0%	100.00%	100.00%													
	250	Sherwin Williams	Black Paint (Kem 400)	7.75	36%	64.39%				2.00%	6%									
	10	Columbia	Gray Primer	10.24	62%	38.48%					0.20%									
total gals./day	85.0		If volatile, enter "1" ==>			1	1	1		1	1	1	1	1	1	1	1			

Manufacturer	Coating Material	Density	Solids	VOC (non-exempt)	Acetone	MEK	Naphthalene	1,2,4-Trimethylbenzene	Ethylbenzene	Methyl n-Propyl Ketone	Methyl Isobutyl Ketone	Toluene	2-Butoxyethyl Acetate	n-Butyl Acetate	Tertiary Butyl Acetate	Zinc Oxide	
		lb/gal	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.
Henkel	Quad Sealant Advanced Grey/Black	10.84	2.146	0.042					0.028								
Henkel	Quad Sealant Clear	7.73	0.755	0.352			0.010		0.101								
Henkel	Quad Sealant White	10.84	1.073	0.055					0.014								
Walmart	Black Spray	5.80	0.288	0.468	0.219			0.008				0.106					
Rust-Oleum	Silver Spray	6.16	0.225	0.578	0.201				0.008			0.401					
Sherwin Williams	Touch-Up Paint	9.10	0.628	0.557					0.059			0.118	0.047	0.178			
Columbia	Interior Wall Paint/Floor Paint	9.90	1.001	0.030												0.021	
LaVanture Products	Adhesive White/Black	12.29	3.162	0.038													
Henkel	Almond - LOS PSS 10.00Z ACWS ALM 12CC	14.09	2.276	0.055													
Hi-Tech Industries	Silicone (Project 1)	8.01	0.678	0.031													
Sherwin Williams	Xylene	7.18	0.000	0.935					0.280								
Sherwin Williams	Mineral Spirits	6.42	0.000	0.836													
Asphalt Co.	9900 Paint	8.57	2.509	2.007		0.112					0.112						
Asphalt Co.	9970 Primer	8.57	0.836	0.390		0.022					0.022						
Hi-Lite Solutions	AeroGreen Paint Prep	8.45	1.067	0.033													
Sherwin Williams	Acetone	6.59	0.000	0.172		0.172											
Sherwin Williams	Black Paint (Kem 400)	7.75	1.797	3.249					0.101	0.303							
Columbia	Gray Primer	10.24	0.164	0.103						0.001							
			<b>Spray Total (lb/hr)</b>	18.605	9.931	0.591	0.134	0.010	0.108	0.794	0.000	0.134	0.625	0.047	0.178	0.000	0.021

Manufacturer	Coating Material	Density	Solids	VOC (non-exempt)	Acetone	MEK	Naphthalene	1,2,4-Trimethylbenzene	Ethylbenzene	Methyl n-Propyl Ketone	Methyl Isobutyl Ketone	Toluene	2-Butoxyethyl Acetate	n-Butyl Acetate	Tertiary Butyl Acetate	Zinc Oxide
		lb/gal	Tons per Year	Tons per Year	Tons per Year											
Henkel	Quad Sealant Advanced Grey/Black	10.84	4.94	0.10	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Henkel	Quad Sealant Clear	7.73	1.74	0.81	0.00	0.00	0.02	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Henkel	Quad Sealant White	10.84	2.47	0.13	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Walmart	Black Spray	5.80	0.66	1.08	0.50	0.00	0.00	0.02	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00

Table 3-2: Paint Analysis

MAX Monthly Use 2015	Included in PTC Application monthly use	Manufacturer	Coating Material	Calcium Carbonate (Limestone)	Xylene	Carbon Black	Aluminum	VM&P Naptha	Stoddard Solvent	Quartz	Cristobalite	Silica NOT TAP	2-(2H-Benzotriaxol-2-yl)-p-cresol NOT TAP	Cobalt 2-Ethylhexanoate NOT TAP	Titanium Dioxide NOT TAP	Talc NOT TAP	hydrotreated middle petroleum distillates NOT TAP
CAS No.				1317-65-3	1330-20-7	1333-86-4	7429-90-5	8032-32-4	8052-41-3	14808-60-7	14464-46-1	112945-52-5	2440-22-4	136-52-7	13463-67-7	14807-96-6	64742-46-7
<b>Weight Percentage Content</b>																	
17.7	100	Henkel	Quad Sealant Advanced Grey/Black	60.00%	5.0%					1%		5%					
6.3	50	Henkel	Quad Sealant Clear		30.0%				30.00%				1%				
6	50	Henkel	Quad Sealant White	30%	5.0%							5%			10.00%		
3.4	50	Walmart	Black Spray			0.60%											
0.4	50	Rust-Oleum	Silver Spray		2.50%		2.5%										
0	50	Sherwin Williams	Touch-Up Paint		45.00%										15.00%		
0	40	Columbia	Interior Wall Paint/Floor Paint								0.8%				11.00%		
19.96	100	LaVanture Products	Adhesive White/Black	55%											10.00%		
26.2	100	Henkel	Almond - LOS PSS 10.00Z ACWS ALM 12CC	60%						1%					5.00%		
4.89	50	Hi-Tech Industries	Silicone (Project 1)														26%
0	50	Sherwin Williams	Xylene		100%												
4	50	Sherwin Williams	Mineral Spirits														
120	250	Asphalt Co.	9900 Paint		4.00%												
2.75	50	Asphalt Co.	9970 Primer		4.00%												
10.2	50	Hi-Lite Solutions	AeroGreen Paint Prep														
0.25	10	Sherwin Williams	Acetone														
	250	Sherwin Williams	Black Paint (Kem 400)		35%	3%								0.20%			
	10	Columbia	Gray Primer		1%					0.1%					8.00%	10.00%	
total gals./day	85.0		If volatile, enter "1" ==>		1			1	1				1	1			1

Manufacturer	Coating Material	Calcium Carbonate (Limestone)	Xylene	Carbon Black	Aluminum	VM&P Naptha	Stoddard Solvent	Quartz	Cristobalite	Silica NOT TAP	2-(2H-Benzotriaxol-2-yl)-p-cresol NOT TAP	Cobalt 2-Ethylhexanoate NOT TAP	Titanium Dioxide NOT TAP	Talc NOT TAP	hydrotreated middle petroleum distillates NOT TAP
		lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.
Henkel	Quad Sealant Advanced Grey/Black	1.694	0.141					0.028		0.141					
Henkel	Quad Sealant Clear		0.302				0.302				0.010				
Henkel	Quad Sealant White	0.424	0.071							0.071			0.141		
Walmart	Black Spray			0.005											
Rust-Oleum	Silver Spray		0.020		0.020										
Sherwin Williams	Touch-Up Paint		0.533										0.178		
Columbia	Interior Wall Paint/Floor Paint								0.008				0.113		
LaVanture Products	Adhesive White/Black	1.760											0.320		
Henkel	Almond - LOS PSS 10.00Z ACWS ALM 12CC	2.202						0.037					0.184		
Hi-Tech Industries	Silicone (Project 1)														0.271
Sherwin Williams	Xylene		0.935												
Sherwin Williams	Mineral Spirits														
Asphalt Co.	9900 Paint		0.223												
Asphalt Co.	9970 Primer		0.045												
Hi-Lite Solutions	AeroGreen Paint Prep														
Sherwin Williams	Acetone														
Sherwin Williams	Black Paint (Kem 400)		1.766	0.151								0.010			
Columbia	Gray Primer		0.003					0.000					0.021	0.027	
	<b>Spray Total (lb/hr)</b>	<b>6.080</b>	<b>4.038</b>	<b>0.156</b>	<b>0.020</b>	<b>0.000</b>	<b>0.302</b>	<b>0.065</b>	<b>0.008</b>	<b>0.212</b>	<b>0.010</b>	<b>0.010</b>	<b>0.957</b>	<b>0.027</b>	<b>0.271</b>

Manufacturer	Coating Material	Calcium Carbonate (Limestone)	Xylene	Carbon Black	Aluminum	VM&P Naptha	Stoddard Solvent	Quartz	Cristobalite	Silica NOT TAP	2-(2H-Benzotriaxol-2-yl)-p-cresol NOT TAP	Cobalt 2-Ethylhexanoate NOT TAP	Titanium Dioxide NOT TAP	Talc NOT TAP	hydrotreated middle petroleum distillates NOT TAP
<b>Tons per Year</b>															
Henkel	Quad Sealant Advanced Grey/Black	3.90	0.33	0.00	0.00	0.00	0.00	0.07	0.00	0.33	0.00	0.00	0.00	0.00	0.00
Henkel	Quad Sealant Clear	0.00	0.70	0.00	0.00	0.00	0.70	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
Henkel	Quad Sealant White	0.98	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.33	0.00	0.00
Walmart	Black Spray	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Table 3-2: Paint Analysis**

MAX Monthly Use 2015	Included in PTC Application monthly use	Manufacturer	Coating Material	Naphtha hydrotreated light NOT TAP	Mineral Spirits (Aliphatic Petroleum Distillates) NOT TAP	V. M. & P. Naphtha NOT TAP	Asphalt NOT TAP	Light Aromatic Hydrocarbons NOT TAP	Heavy Aliphatic Naphtha	Aromatic 150 NOT TAP
CAS No.				64742-49-0	64742-88-7	64742-89-8	64742-93-4	64742-95-6	Proprietary	70693-06-0
17.7	100	Henkel	Quad Sealant Advanced Grey/Black						60.0%	
6.3	50	Henkel	Quad Sealant Clear							
6	50	Henkel	Quad Sealant White						45.0%	
3.4	50	Walmart	Black Spray			9.00%				
0.4	50	Rust-Oleum	Silver Spray							
0	50	Sherwin Williams	Touch-Up Paint		5.00%			5.00%		
0	40	Columbia	Interior Wall Paint/Floor Paint							
19.96	100	LaVanture Products	Adhesive White/Black							
26.2	100	Henkel	Almond - LOS PSS 10.00Z ACWS ALM 12CC							
4.89	50	Hi-Tech Industries	Silicone (Project 1)							
0	50	Sherwin Williams	Xylene							
4	50	Sherwin Williams	Mineral Spirits		100%					
120	250	Asphalt Co.	9900 Paint	20%		20.00%				
2.75	50	Asphalt Co.	9970 Primer	20%		20.00%				
10.2	50	Hi-Lite Solutions	AeroGreen Paint Prep							
0.25	10	Sherwin Williams	Acetone							
	250	Sherwin Williams	Black Paint (Kem 400)			18%		1.00%		
	10	Columbia	Gray Primer		6.00%	30.00%				
total gals./day	85.0		If volatile, enter "1" ==>	1	1	1		1	1	1
		<b>Manufacturer</b>	<b>Coating Material</b>	Naphtha hydrotreated light NOT TAP	Mineral Spirits (Aliphatic Petroleum Distillates) NOT TAP	V. M. & P. Naphtha NOT TAP	Asphalt NOT TAP	Light Aromatic Hydrocarbons NOT TAP	Heavy Aliphatic Naphtha	Aromatic 150 NOT TAP
				lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.
		Henkel	Quad Sealant Advanced Grey/Black						1.694	
		Henkel	Quad Sealant Clear							
		Henkel	Quad Sealant White						0.635	
		Walmart	Black Spray			0.068				
		Rust-Oleum	Silver Spray							
		Sherwin Williams	Touch-Up Paint		0.059			0.059		
		Columbia	Interior Wall Paint/Floor Paint							
		LaVanture Products	Adhesive White/Black							
		Henkel	Almond - LOS PSS 10.00Z ACWS ALM 12CC							
		Hi-Tech Industries	Silicone (Project 1)							
		Sherwin Williams	Xylene							
		Sherwin Williams	Mineral Spirits		0.836					
		Asphalt Co.	9900 Paint	1.115		1.115				
		Asphalt Co.	9970 Primer	0.223		0.223				
		Hi-Lite Solutions	AeroGreen Paint Prep							
		Sherwin Williams	Acetone							
		Sherwin Williams	Black Paint (Kem 400)			0.908		0.050		
		Columbia	Gray Primer		0.016	0.080				
			<b>Spray Total (lb/hr)</b>	1.338	0.911	2.394	0.000	0.110	2.329	0.000
		<b>Manufacturer</b>	<b>Coating Material</b>	Naphtha hydrotreated light NOT TAP	Mineral Spirits (Aliphatic Petroleum Distillates) NOT TAP	V. M. & P. Naphtha NOT TAP	Asphalt NOT TAP	Light Aromatic Hydrocarbons NOT TAP	Heavy Aliphatic Naphtha	Aromatic 150 NOT TAP
		Henkel	Quad Sealant Advanced Grey/Black	0.00	0.00	0.00	0.00	0.00	3.90	0.00
		Henkel	Quad Sealant Clear	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Henkel	Quad Sealant White	0.00	0.00	0.00	0.00	0.00	1.46	0.00
		Walmart	Black Spray	0.00	0.00	0.16	0.00	0.00	0.00	0.00

**Table 3-2: Paint Analysis**

MAX Monthly Use 2015	Included in PTC Application monthly use	Manufacturer	Coating Material	Density	Solids	VOC (non-exempt)	Acetone	MEK	Naphthalene	1,2,4-Trimethylbenzene	Ethylbenzene	Methyl n-Propyl Ketone	Methyl Isobutyl Ketone	Toluene	2-Butoxyethyl Acetate	n-Butyl Acetate	Tertiary Butyl Acetate	Zinc Oxide
CAS No.							67-64-1	78-93-3	91-20-3	95-63-6 25551-13-7	100-41-4	107-87-9	108-10-1	108-88-3	112-07-2	123-86-4	540-88-5	1314-13-2
				lbs./ga.l	Weight Percentage Content	Weight Percentage Content	Weight Percentage Content											
		Rust-Oleum	Silver Spray	6.16	0.52	1.33	0.46	0.00	0.00	0.00	0.02	0.00	0.00	0.92	0.00	0.00	0.00	0.00
		Sherwin Williams	Touch-Up Paint	9.10	1.45	1.28	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.27	0.11	0.41	0.00	0.00
		Columbia	Interior Wall Paint/Floor Paint	9.90	2.31	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
		LaVanture Products	Adhesive White/Black	12.29	7.29	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Henkel	Almond - LOS PSS 10.00Z ACWS ALM 12CC	14.09	5.24	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Hi-Tech Industries	Silicone (Project 1)	8.01	1.56	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Sherwin Williams	Xylene	7.18	0.00	2.15	0.00	0.00	0.00	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Sherwin Williams	Mineral Spirits	6.42	0.00	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Asphalt Co.	9900 Paint	8.57	5.78	4.63	0.00	0.26	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00
		Asphalt Co.	9970 Primer	8.57	1.93	0.90	0.00	0.05	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00
		Hi-Lite Solutions	AeroGreen Paint Prep	8.45	2.46	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Sherwin Williams	Acetone	6.59	0.00	0.40	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Sherwin Williams	Black Paint (Kem 400)	7.75	4.14	7.49	0.00	0.00	0.00	0.23	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Columbia	Gray Primer	10.24	0.38	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			<b>Spray Total (tons/yr)</b>		<b>42.87</b>	<b>22.88</b>	<b>1.36</b>	<b>0.31</b>	<b>0.02</b>	<b>0.25</b>	<b>1.83</b>	<b>0.00</b>	<b>0.31</b>	<b>1.44</b>	<b>0.11</b>	<b>0.41</b>	<b>0.00</b>	<b>0.05</b>

Example Calculation

Max Hourly Ethylbenzene in Quad Sealant Advanced Grey/Black = 100 gal/month \* 10.84 lb/gal density \* 1.0 wt% Ethylbenzene in Quad Grey/Black \* 1 month/4 weeks \* 1 week/4 days \* 1 day/24 hrs (24-hr. average)  
= 0.028 lb/hr Ethylbenzene in Quad Grey/Black

Max 12-month Ethylbenzene in Quad Sealant Advanced Grey/Black = 100 ga./month \* 10.84 lb/gal density \* 1.0 wt% Ethylbenzene in Quad Grey/Black \* 12 months/year  
= 130.1 lb/year Ethylbenzene in Quad Grey/Black  
130.1 lb/year Ethylbenzene in Quad Grey/Black / (2000 lbs./ton)  
= 0.07 tons/year Ethylbenzene in Quad Grey/Black

**Table 3-2: Paint Analysis**

MAX Monthly Use 2015	Included in PTC Application monthly use	Manufacturer	Coating Material	Calcium Carbonate (Limestone)	Xylene	Carbon Black	Aluminum	VM&P Naptha	Stoddard Solvent	Quartz	Cristobalite	Silica NOT TAP	2-(2H-Benzotriaxol-2-yl)-p-cresol NOT TAP	Cobalt 2-Ethylhexanoate NOT TAP	Titanium Dioxide NOT TAP	Talc NOT TAP	hydrotreated middle petroleum distillates NOT TAP
			CAS No.	1317-65-3	1330-20-7	1333-86-4	7429-90-5	8032-32-4	8052-41-3	14808-60-7	14464-46-1	112945-52-5	2440-22-4	136-52-7	13463-67-7	14807-96-6	64742-46-7
<b>Weight Percentage Content</b>																	
		Rust-Oleum	Silver Spray	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Sherwin Williams	Touch-Up Paint	0.00	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00	0.00
		Columbia	Interior Wall Paint/Floor Paint	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.26	0.00	0.00
		LaVanture Products	Adhesive White/Black	4.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.00
		Henkel	Almond - LOS PSS 10.00Z ACWS ALM 12CC	5.07	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.42	0.00	0.00
		Hi-Tech Industries	Silicone (Project 1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62
		Sherwin Williams	Xylene	0.00	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Sherwin Williams	Mineral Spirits	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Asphalt Co.	9900 Paint	0.00	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Asphalt Co.	9970 Primer	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Hi-Lite Solutions	AeroGreen Paint Prep	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Sherwin Williams	Acetone	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Sherwin Williams	Black Paint (Kem 400)	0.00	4.07	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00
		Columbia	Gray Primer	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.06	0.00
			<b>Spray Total (tons/yr)</b>	<b>14.01</b>	<b>9.30</b>	<b>0.36</b>	<b>0.05</b>	<b>0.00</b>	<b>0.70</b>	<b>0.15</b>	<b>0.02</b>	<b>0.49</b>	<b>0.02</b>	<b>0.02</b>	<b>2.21</b>	<b>0.06</b>	<b>0.62</b>

Example Calculation

Max Hourly Ethylbenzene in Quad Sealant Advanced Grey/Black  
(24-hr. average)

Max 12-month Ethylbenzene in Quad Sealant Advanced Grey/Black

**Table 3-2: Paint Analysis**

MAX Monthly Use 2015	Included in PTC Application monthly use	Manufacturer	Coating Material	Naphtha hydrotreated light NOT TAP	Mineral Spirits (Aliphatic Petroleum Distillates) NOT TAP	V. M. & P. Naphtha NOT TAP	Asphalt NOT TAP	Light Aromatic Hydrocarbons NOT TAP	Heavy Aliphatic Naphtha	Aromatic 150 NOT TAP
			CAS No.	64742-49-0	64742-88-7	64742-89-8	64742-93-4	64742-95-6	Proprietary	70693-06-0
		Rust-Oleum	Silver Spray	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Sherwin Williams	Touch-Up Paint	0.00	0.14	0.00	0.00	0.14	0.00	0.00
		Columbia	Interior Wall Paint/Floor Paint	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		LaVanture Products	Adhesive White/Black	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Henkel	Almond - LOS PSS 10.00Z ACWS ALM 12CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Hi-Tech Industries	Silicone (Project 1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Sherwin Williams	Xylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Sherwin Williams	Mineral Spirits	0.00	1.93	0.00	0.00	0.00	0.00	0.00
		Asphalt Co.	9900 Paint	2.57	0.00	2.57	0.00	0.00	0.00	0.00
		Asphalt Co.	9970 Primer	0.51	0.00	0.51	0.00	0.00	0.00	0.00
		Hi-Lite Solutions	AeroGreen Paint Prep	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Sherwin Williams	Acetone	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Sherwin Williams	Black Paint (Kern 400)	0.00	0.00	2.09	0.00	0.12	0.00	0.00
		Columbia	Gray Primer	0.00	0.04	0.18	0.00	0.00	0.00	0.00
			<b>Spray Total (tons/yr)</b>	<b>3.08</b>	<b>2.10</b>	<b>5.52</b>	<b>0.00</b>	<b>0.25</b>	<b>5.37</b>	<b>0.00</b>

Example Calculation

Max Hourly Ethylbenzene in Quad Sealant Advanced Grey/Black  
(24-hr. average)

Max 12-month Ethylbenzene in Quad Sealant Advanced Grey/Black

**Table 3-3: Paint Booth Criteria Pollutant Emissions Summary**

Criteria Air Pollutants	Maximum Spray Rate <sup>1</sup>		Spray Retention Rate <sup>2</sup>	Potential to Emit		Paint Filter Efficiency <sup>3</sup>	Controlled Emissions	
	lb/hr	ton/yr	%	lb/hr	ton/yr	%	lb/hr	ton/yr
PM <sub>10</sub>	18.60	42.87	65%	6.51	15.00	98.65%	0.088	0.203
PM <sub>2.5</sub>	18.60	42.87	65%	6.51	15.00	98.65%	0.088	0.203
VOC	9.93	22.88	0%	9.93	22.88	0%	9.93	22.88

Example Calculations

Maximum hourly or yearly spray rate lbs./hr. \* (100%-spray retention rate %) \* (100%-filter efficiency%) = controlled lbs per hr. or tons/year

Example PM10 lbs./hr. calculation: maximum total paint solids 18.6 lbs./hr. \* (100%-65%) \* (100%-98.65%) = 0.088 lbs. PM10/hr.

Example PM10 ton/year calculation: maximum total paint solids 42.87 tons/yr. \* (100%-65%) \* (100%-98.65%) = 0.203 tons PM10/yr.

Notes:

1. The maximum hourly (24-hr. average) or annual Spray Total of the paint coatings.
2. Non-volatile emissions are calculated using a coating retention rate of 65% (LPH-200 HVLP spray gun).

**Table 3-4: Undercoating Analysis**

MAX Monthly Use 2015	Included in PTC Application monthly use	Manufacturer	Coating Material	Density	Solids	VOC (non-exempt)	Acetone	Stoddard Solvent	Naphtha hydrotreated light NOT TAP	Asphalt NOT TAP
				lbs./gal.	Weight Percentage Content	Weight Percentage Content				
229	350	Z Technologies	Z Guard 1021FRX	9.591	69%	26.27%	8.50%	12.60%	8.7%	27.20%
total/day	21.9		If volatile, enter "1" ==>			1	1	1	1	

Manufacturer	Coating Material	Density	Solids	VOC (non-exempt)	Acetone	Stoddard Solvent	Naphtha hydrotreated light NOT TAP	Asphalt NOT TAP
		lbs./gal.	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.	lbs./hr.
Z Technologies	Z Guard 1021FRX	9.59	6.032	2.297	0.743	1.101	0.761	2.378
	<b>Spray Total (lb/hr)</b>		6.032	2.297	0.743	1.101	0.761	2.378

Manufacturer	Coating Material	Density	Solids	VOC (non-exempt)	Acetone	Stoddard Solvent	Naphtha hydrotreated light NOT TAP	Asphalt NOT TAP
		lbs./gal.	Tons per Year	Tons per Year	Tons per Year	Tons per Year	Tons per Year	Tons per Year
Z Technologies	Z Guard 1021FRX	9.59	13.90	5.29	1.71	2.54	1.75	5.48
	<b>Spray Total (tons/yr)</b>		13.90	5.29	1.71	2.54	1.75	5.48

Example Calculation

Max Hourly PM in Z Guard 1021FRX  
(24-hr. average)

$$= 350 \text{ gal Z Guard 1021FRX/month} * 9.591 \text{ lb/gal density} * 69\% \text{ solids in Z Guard 1021FRX} * 1 \text{ month/4 weeks} * 1 \text{ week/4 days} * 1 \text{ day/24 hrs}$$

$$= 6.03 \text{ lb/hr Solids in Z Guard 1021FRX}$$

Max Hourly Acetone in Z Guard 1021FRX  
(24-hr. average)

$$= 350 \text{ gal Z Guard 1021FRX/month} * 9.591 \text{ lb/gal density} * 8.5 \text{ wt\% Acetone in Z Guard 1021FRX} * 1 \text{ month/4 weeks} * 1 \text{ week/4 days} * 1 \text{ day/24 hrs}$$

$$= 0.74 \text{ lb/hr Acetone in Z Guard 1021FRX}$$

Max 12-month PM in Z Guard 1021FRX

$$= 350 \text{ gal Z Guard 1021FRX/month} * 9.591 \text{ lb/gal density} * 69\% \text{ solids} * 12 \text{ months} = 27,791.8 \text{ lbs. PM/year}$$

$$27,791.8 \text{ lbs. PM/yr.} / (2000 \text{ lbs/ton}) = 13.90 \text{ tons PM/year}$$

Max 12-month Acetone in Z Guard 1021FRX

$$= 350 \text{ gal Z Guard 1021FRX/month} * 9.591 \text{ lb/gal density} * 8.5\% \text{ Acetone} * 12 \text{ months} = 3,424.0 \text{ lbs. Acetone/year}$$

$$3,424.0 \text{ lbs. PM/yr.} / (2000 \text{ lbs/ton}) = 1.71 \text{ tons Acetone/year}$$

**Table 3-5: Undercoating Criteria Pollutant Emissions Summary**

Criteria Air Pollutants	Maximum Spray Rate <sup>1</sup>		Spray Retention Rate <sup>2</sup>	Potential to Emit		Paint Filter Efficiency <sup>4</sup>	Controlled Emissions	
	lb/hr	ton/yr	%	lb/hr	ton/yr	%	lb/hr	ton/yr
PM <sub>10</sub>	6.03	13.90	40%	3.62	8.34	96.00%	0.145	0.334
PM <sub>2.5</sub>	6.03	13.90	40%	3.62	8.34	96.00%	0.145	0.334
VOC	2.30	5.29	0%	2.30	5.29	0%	2.30	5.29

Example Calculations

Maximum hourly or yearly spray rate lbs./hr. \* (100%-spray retention rate %) \* (100%-filter efficiency%) = controlled lbs per hr. or tons/year

Example PM10 lbs./hr. calculation: maximum total undercoating solids 6.03 lbs./hr. \* (100%-65%) \* (100%-96%) = 0.145 lbs. PM10/hr.

Example PM10 ton/year calculation: maximum total paint solids 13.9 tons/yr. \* (100%-65%) \* (100%-96%) = 0.334 tons PM10/yr.

Notes:

1. The maximum hourly (24-hr. average) or annual Spray Total of the paint coatings.
2. Non-volatile emissions are calculated using a coating retention rate of 40% (Contractor II/FTX II spray gun).
3. Controlled non-volatile emissions are calculated using an exhaust filter removal efficiency of 96%.

#### **4. EMISSION INVENTORY WORKBOOK FORMS EI1-EI4 DOCUMENTATION**

TAP and HAP emissions from the Interstate sources are summarized in Table 4-2, Table 4-3, Table 4-4, Table 4-5, and Table 4-6. These emissions include those from the natural gas combustion at heaters, welding, paint booth and undercoating booth.

##### **4.1 New Source Review (NSR) Regulated Pollutants Potential to Emit**

NSR applies to new major sources and major modifications in non-attainment areas. Pre-project estimated NSR Regulated Pollutant emissions are set at zero and post-project estimated NSR Regulated Pollutant emission estimates for the same sources are summarized in Table 4-1a – 4-1c. The PTE under the proposed usage limits for each of the criteria pollutants associated with this project is less than 100 tons per year.

##### **4.2 Toxic Air Pollutant Facility-Wide Emissions**

Estimated material TAP emissions under the proposed coating usage limits are summarized in Table 4-2, Table 4-3, Table 4-4, and Table 4-5 for non-carcinogenic and carcinogenic TAPs. The PTE, uncontrolled emissions, of each TAP is compared to its respective Screening Emission Level.<sup>5</sup> None of the emissions exceed screening emission levels (ELs).

##### **4.3 Hazardous Air Pollutant Facility-Wide Emissions**

Estimated HAP emissions at Interstate under the proposed coating usage limits are summarized in Table 4-6. The maximum Facility-wide PTE of total HAPs is 5.8 tons per year. The highest individual HAP is xylene at 4.1 tons/year. The predominant contributor of xylene is paint coatings, 4 tons/year.

##### **4.4 Prevention of Significant Deterioration**

Interstate's operations are not included in the list of 28 Prevention of Significant Deterioration (PSD) source categories. Therefore, to qualify as a PSD Major Source, the Interstate facility must have the Potential to Emit (PTE) greater than 250 tons per year of any NSR regulated pollutant.

With this permit, VOC emissions, the NSR-regulated pollutant with the highest emission rate at the facility, are estimated at approximately 14.1 tons per year. Consequently, Interstate does not qualify as a PSD Major Source.

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<sup>5</sup> IDAPA 58.01.01, Sections 585 and 586.

**Tables 4-1a to 4-1c:  
Facility-Wide NSR Regulated Pollutant Emissions**

**Table 4-1a: Pre-Project Potential to Emit** (based on existing permit conditions)

Emissions Unit	PM <sub>2.5</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>2</sub>	CO	VOC	Lead
	tons/yr						
MAU1	0.00	0.00	0.000	0.00	0.00	0.00	0.000000
UH	0.00	0.00	0.000	0.00	0.00	0.00	0.000000
Wood Cutting	0.00	0.00	0.000	0.00	0.00	0.00	0.000000
Welding	0.00	0.00	0.000	0.00	0.00	0.00	0.000000
Paint Booth	0.00	0.00	0.000	0.00	0.00	0.00	0.000000
Undercoating Booth	0.00	0.00	0.000	0.00	0.00	0.00	0.000000
<b>Total =</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.000000</b>

**Table 4-1b: Post-Project Potential to Emit** (based on requested permit conditions)

Emissions Unit	PM <sub>2.5</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>2</sub>	CO	VOC	Lead
	tons/yr						
MAU1	0.06	0.06	5.0E-03	0.8	0.7	0.05	4.1E-06
UH	0.01	0.01	0.001	0.1	0.06	0.01	7.5E-07
Wood Cutting	0.2	0.2	0	0	0	0	0
Welding	0.08	0.08	0	0	0	0	0
Paint Booth	0.20	0.20	0	0	0	22.88	0
Undercoating Booth	0.33	0.33	0	0	0	5.29	0
<b>Total =</b>	<b>0.88</b>	<b>0.88</b>	<b>0.006</b>	<b>0.97</b>	<b>0.75</b>	<b>28.2</b>	<b>4.9E-06</b>

**Table 4-1c: Changes in Potential to Emit**

Emissions Unit	PM <sub>2.5</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>2</sub>	CO	VOC	Lead
	tons/yr						
MAU1	0.063	0.063	5.0E-03	0.83	0.69	0.05	4.1E-06
UH	0.011	0.011	0.001	0.14	0.06	0.01	7.5E-07
Wood Cutting	0.186	0.186	0.000	0.00	0.00	0.00	0.0E+00
Welding	0.080	0.080	0.000	0.00	0.00	0.00	0.0E+00
Paint Booth	0.203	0.203	0.000	0.00	0.00	22.88	0.0E+00
Undercoating Booth	0.334	0.334	0.000	0.00	0.00	5.29	0.0E+00
<b>Total =</b>	<b>0.88</b>	<b>0.88</b>	<b>0.006</b>	<b>0.97</b>	<b>0.75</b>	<b>28.2</b>	<b>4.9E-06</b>

**Table 4-2:  
Heater Natural-Gas Combustion Toxic Air Pollutant Emissions**

Non-Carcinogenic Toxic Air Pollutant (24 hr Average)	CAS	Controlled Hourly Emissions		Emission Change (lb/hr)	Screening Emission Level (lb/hr)	Exceeds Screening Emission Level?
		Pre-Project (lb/hr)	Post Project (lb/hr)			
Naphthalene	91-20-3	0	1.570E-06	1.570E-06	3.33E+00	No
Toluene	108-88-3	0	7.583E-06	7.583E-06	2.50E+01	No
Barium	7440-39-3	0	9.814E-06	9.814E-06	3.30E-02	No
Chromium	7440-47-3	0	3.123E-06	3.123E-06	3.30E-02	No
Copper	7440-50-8	0	3.208E-06	3.208E-06	6.70E-02	No
Manganese	7439-96-5	0	8.475E-07	8.475E-07	3.33E-01	No
Molybdenum	7439-98-7	0	2.453E-06	2.453E-06	6.67E-01	No
Selenium	7782-49-2	0	2.497E-04	2.497E-04	1.30E-02	No
Vanadium	1314-62-1	0	5.130E-06	5.130E-06	3.00E-03	No
Zinc	7440-66-6	0	6.468E-05	6.468E-05	6.67E-01	No
Carcinogenic Toxic Air Pollutant (Annual Average)	CAS	Controlled Hourly Emissions		Emission Change (lb/hr)	Screening Emission Level (lb/hr)	Exceeds Screening Emission Level?
		Pre-Project (lb/hr)	Post Project (lb/hr)			
Formaldehyde	50-00-0	0	1.7E-04	1.7E-04	5.1E-04	No
Benzo(a)pyrene	50-32-8	0	2.7E-09	2.7E-09	2.0E-06	No
3-Methylchloranthene	56-49-5	0	4.0E-09	4.0E-09	2.5E-06	No
Benzene	71-43-2	0	4.7E-06	4.7E-06	8.0E-04	No
Arsenic	7440-38-2	0	4.5E-07	4.5E-07	1.5E-06	No
Beryllium	7440-41-7	0	2.7E-08	2.7E-08	2.8E-05	No
Cadmium	7440-43-9	0	2.5E-06	2.5E-06	3.7E-06	No
Nickel	7440-02-0	0	4.7E-06	4.7E-06	2.7E-05	No
Polyaromatic Hydrocarbon (Max)		0	1.4E-07	1.4E-07	9.1E-05	No
Polycyclic Organics: 7-PAH Group <sup>1</sup>		0	2.5E-08	2.5E-08	2.0E-06	No

1. Polycyclic Organic Matter (POM) is considered as one TAP comprised of: benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, chrysene, indeno(1,2,3-cd)pyrene, benzo(a)pyrene. The total is compared to benzo(a)pyrene.



Table 4-4 Paint Coating Uncontrolled Toxic Air Pollutant Emissions

Use (gals./month)	Manufacturer	Material	TAP	Acetone	MEK	Naphthalene	1,2,4-Trimethyl-benzene	Ethyl-benzene	Methyl n-Propyl Ketone	Methyl Isobutyl Ketone	Toluene	2-Butoxyethyl Acetate	n-Butyl Acetate	Tertiary Butyl Acetate	Zinc Oxide		
			CAS No.	91-20-3													
			EL (lbs./hr.)	1.19E+02	6.53E+01	1.00E+01	8.20E+00	2.90E+01	1.47E+00	1.37E+01	2.50E+01	8.33E+00	4.73E+01	6.33E+01	6.67E-01		
TAP lbs./hr <EL																	
TAP lbs./hr >EL																	
			(lbs./hr.)	(lbs./hr.)	(lbs./hr.)	(lbs./hr.)	(lbs./hr.)	(lbs./hr.)	(lbs./hr.)	(lbs./hr.)	(lbs./hr.)	(lbs./hr.)	(lbs./hr.)	(lbs./hr.)	(lbs./hr.)		
65	Henkel	Quad Sealant Advanced Grey/Black						1.84E-02									
50	Henkel	Quad Sealant Clear			1.01E-02			1.01E-01									
50	Henkel	Quad Sealant White						1.41E-02									
50	Walmart	Black Spray	2.19E-01			7.56E-03				1.06E-01							
50	Rust-Oleum	Silver Spray	2.01E-01					8.03E-03		4.01E-01							
50	Sherwin Williams	Touch-Up Paint						5.92E-02		1.18E-01	4.74E-02	1.78E-01					
40	Columbia	Interior Wall Paint/Floor Paint													7.22E-03		
100	LaVanture Products	Adhesive White/Black															
50	Henkel	Almond - LOS PSS 10.00Z ACWS ALM 12CC															
50	Hi-Tech Industries	Silicone (Project 1)															
50	Sherwin Williams	Xylene						2.80E-01									
50	Sherwin Williams	Mineral Spirits															
250	Asphalt Co.	9900 Paint		1.12E-01						1.12E-01							
50	Asphalt Co.	9970 Primer		2.23E-02						2.23E-02							
50	Hi-Lite Solutions	AeroGreen Paint Prep															
10	Sherwin Williams	Acetone	1.72E-01														
250	Sherwin Williams	Black Paint (Kem 400)				1.01E-01		3.03E-01									
10	Columbia	Gray Primer						5.33E-04									

Table 4-4 Paint Coating Uncontrolled Toxic Air Pollutant Emissions

		TAP	Calcium Carbonate (Limestone)	Xylene	Carbon Black	Aluminum	VM&P Naptha	Stoddard Solvent	Quartz	Cristobalite
		CAS No.								
		EL (lbs./hr.)	6.67E-01	2.90E+01	2.30E-01	6.67E-01	9.13E+01	3.50E+01	6.70E-03	3.30E-03
		TAP lbs./hr <EL								
		TAP lbs./hr >EL								
Use (gals./month)	Manufacturer	Material	(lbs./hr.)	(lbs./hr.)	(lbs./hr.)	(lbs./hr.)	(lbs./hr.)	(lbs./hr.)	(lbs./hr.)	(lbs./hr.)
65	Henkel	Quad Sealant Advanced Grey/Black	3.85E-01	9.18E-02					6.42E-03	
50	Henkel	Quad Sealant Clear		3.02E-01				1.43E-03		
50	Henkel	Quad Sealant White	1.48E-01	7.06E-02						
50	Walmart	Black Spray			1.59E-03					
50	Rust-Oleum	Silver Spray		2.01E-02		7.02E-03				
50	Sherwin Williams	Touch-Up Paint		5.33E-01						
40	Columbia	Interior Wall Paint/Floor Paint								3.90E-05
100	LaVanture Products	Adhesive White/Black	6.16E-01							
50	Henkel	Almond - LOS PSS 10.00Z ACWS ALM 12CC	3.85E-01						6.42E-03	
50	Hi-Tech Industries	Silicone (Project 1)								
50	Sherwin Williams	Xylene		9.35E-01						
50	Sherwin Williams	Mineral Spirits								
250	Asphalt Co.	9900 Paint		2.23E-01						
50	Asphalt Co.	9970 Primer		4.46E-02						
50	Hi-Lite Solutions	AeroGreen Paint Prep								
10	Sherwin Williams	Acetone								
250	Sherwin Williams	Black Paint (Kem 400)		1.77E+00	5.30E-02					
10	Columbia	Gray Primer		2.67E-03					9.33E-05	

### Table 4-5 Undercoating Uncontrolled Toxic Air Pollutant Emissions

Use (gals./month)			Acetone	Stoddard Solvent
			CAS No.	
			91-20-3	
		EL (lbs./hr.)	1.19E+02	6.53E+01
	TAP lbs./hr <EL			
	TAP lbs./hr >EL			
	Manufacturer	Material	(lbs./hr.)	(lbs./hr.)
350	Z Technologies	Z Guard 1021FRX	7.43E-01	1.10E+00

**Table 4-6:  
Facility-Wide Hazardous Air Pollutant Emissions**

Hazardous Air Pollutant	CAS	Sources			Potential to Emit (tons/yr)
		MAU+UH	Paint	Welding	
2-Methylnaphthalene	91-57-6				2.7E-07
3-Methylchloranthrene	56-49-5	X			2.0E-08
Acenaphthene	83-32-9				2.0E-08
Acenaphthylene	208-96-8	X			2.0E-08
Anthracene	120-12-7	X			2.7E-08
Arsenic	7440-38-2	X			2.0E-06
Barium	7440-39-3	X		X	5.0E-05
Benzene	71-43-2	X			1.2E-05
Benzo(a)anthracene	56-55-3	X			1.4E-08
Benzo(a)pyrene	50-32-8	X			2.0E-08
Benzo(b)fluoranthene	205-99-2	X			1.4E-08
Benzo(g,h,i)perylene	191-24-2	X			2.0E-08
Benzo(k)fluoranthene	207-08-9	X			2.0E-08
Beryllium	7440-41-7	X		X	1.2E-07
Cadmium	7440-43-9	X			1.1E-05
Chromium	7440-47-3	X		X	2.3E-05
Chrysene	218-01-9	X			2.0E-08
Cobalt	7440-48-4	X		X	8.2E-07
Dibenzo(a,h)anthracene	53-73-3	X			1.4E-08
Dichlorobenzene	25321-22-6	X			1.2E-05
Ethylbenzene	100-41-4		X		1.8E+00
Fluoranthene	206-44-0	X			3.4E-08
Fluorene	86-73-7	X			3.2E-08
Formaldehyde	50-00-0	X			7.3E-04
Hexane	110-54-3	X			1.8E-02
Indeno(1,2,3-cd)pyrene	193-39-5	X			2.0E-08
Lead Compounds	7439-92-1	X			4.9E-06
Manganese	7439-96-5	X		X	5.2E-04
Mercury Compounds	7439-97-6	X			2.5E-06
Methyl Isobutyl Ketone	108-10-1		X		3.1E-01
Naphthalene	91-20-3	X			6.0E-06
Nickel	7440-02-0	X		X	2.2E-05
Phenanthrene	85-01-8	X			1.9E-07
Pyrene	1290-00-0	X			5.6E-08
Polycyclic Organic Matter	NA	X			1.1E-07
Selenium	7782-49-2	X			2.3E-07
Toluene	108-88-3	X	X		1.4E+00
Xylene	1330-20-7	X	X		9.3E+00
<b>TOTAL =</b>		0.02	<b>12.88</b>	0.001	<b>12.9</b>

## **5. PLOT PLAN – FORM PP DOCUMENTATION**

### **5.1 Facility Boundary**

The Interstate facility is surrounded by a fence and gates to control entry. Therefore, the ambient air boundary is the fence-line and the gates, as shown in Figure 1 (below).



Google Earth Pro Imagery April 1, 2016.

**Legend**

--- Ambient Air Boundary

Scale As Indicated

**TORF**  
ENVIRONMENTAL  
MANAGEMENT

**Figure 1 Plot Plan**

**Interstate Group, LLC**  
605 N. 39th Street  
Nampa, ID 83687

June 2016

## **6. MODELING APPLICABILITY ASSESSMENT**

### **6.1 Modeling Source Parameters**

All equipment that will be used for which pre-permit construction approval is requested is described in detail below. The descriptions include, but are not limited to, manufacturer, model number or other descriptor, serial number, maximum process rate, proposed process rate, maximum heat input capacity, stack height, stack diameter, stack gas flowrate, stack gas temperature, etc.

#### **6.1.1 MAU**

For cold weather operations, MAU1 includes a direct-fired, natural gas fueled air heater Titan, Model TA-122 NG VRH, serial number 16281, Make-up air Unit, MAU1. For the purposes of estimating emissions, an on-line rating of 100% or 8760 hours per year is used. The actual anticipated process rate will be during cold weather, 4 days per week, 10 hours per day. The maximum heat input capacity is 1.925 MMBtu per hour. Maximum gas flow rate will be 1,887 sq. feet/hour and exhaust gas temperature estimated to be 80-100°F. The combustion gases are emitted with the heated air into the Paint Shop and, ultimately, via the Paint Booth exhaust. Combustion gas emissions from MAU1 are estimated in Table 2-1.

#### **6.1.2 Unit Heaters**

For cold weather operations, 7 unit heaters will be in the main building, 1 unit heater in the paint booth building, and 2 unit heaters in the wood shop. Each of these heaters will be indirect-fired, natural gas, SunRay Model SIR-35. For the purposes of estimating emissions, an on-line rating of 100% or 8760 hours per year is used. The actual anticipated process rate will be during cold weather, 4 days per week, 10 hours per day. The maximum heat input capacity of each heater is 35,000 MBtu per hour. The combustion gases are estimated to be 400°F, emitted via a 4-inch diameter vent through the roof, approximately 25 feet above the ground. The vents are equipped with a rain cap. Gas flow rate is not available from the manufacturer; the manufacturer reports that this value is not a standard parameter for this type of equipment. Combustion gas emissions from the heaters are estimated in Table 2-2.

#### **6.1.3 Dust Collectors**

Emissions from wood cutting are controlled by 2 Jet DC 1200VX dust filters equipped with filter canisters and vented into the room. The canister control efficiencies are rated at 86% efficient for 1-micron particles.



#### **6.1.4 Booth Filter Vents**

##### Paint Booth

The Paint Booth emissions will be emitted via the Paint Booth exhaust, Global Finishing Solutions (GFS) Part # TAB-36-050T3T, fan exhaust rate 16,800 CFM, EP1 stack diameter 34 inches and height 31 feet above the ground, assuming an approximate roof height of 20 feet above the ground. Paint emissions will be controlled by 36 2-inch thick, 20-inch by 20-inch Chemco filters. Paint emissions from the booth are estimated in Table 3-3 and Table 4-4.

##### Undercoat Booth

The Undercoating Booth emissions will be emitted via the filters mounted on the side of the booth wall, 28" Height X 38-1/2" Width, fan Model number-SWB-233-20, fan exhaust rate 10,000 CFM, velocity 1,653 feet per second. Emissions will be controlled by 2 units of 9, 2-inch thick, 20-inch by 20-inch Chemco filters. Emissions from the booth are estimated in Table 3-5 and Table 4-5.

#### **6.2 Criteria Pollutant Modeling Applicability**

Facility-wide criteria pollutant estimated emissions are totaled in Table 6-1 and compared to DEQ's BRC Modeling Thresholds. None of the hourly or annual criteria pollutant rates exceed the modeling thresholds. Therefore, modeling of criteria pollutant emissions is not required for this permit.

#### **6.3 TAP Pollutant Modeling Applicability**

Individual material TAP estimated emissions are shown in Table 4-2, Table 4-3, Table 4-4, and Table 4-5, (see Section 4) and compared to their respective screening emission levels. None of the TAP emission rates exceeds the screening emission level. Therefore, modeling of TAP emissions is not required for this permit.

**Table 6-1: Site-wide Criteria Pollutant Modeling Applicability Summary**

Criteria Air Pollutants	PTE Emissions		Significance Threshold		Below Regulatory Concern	
	lb/hr	T/yr	T/yr	Exceed?	T/yr	Exceed?
NO <sub>2</sub>	0.22	0.97	40	No	4	No
CO	0.17	0.75	100	No	10	No
PM <sub>10</sub> <sup>1</sup>	0.362	0.83	15	No	1.5	No
PM <sub>2.5</sub> <sup>1</sup>	0.362	0.83	10	No	1	No
SO <sub>2</sub>	1.3E-03	5.9E-03	40	No	4	No
VOC	12.24	28.23	40	No	4	YES
Lead	1.1E-06	4.9E-06	0.6	No	0.06	No
	8.0E-04	lb/month				
<b>Total Criteria Emissions (ton/yr) =</b>		<b>30.79</b>				

## **7. FEDERAL REGULATION APPLICABILITY – FORM FRA DOCUMENTATION**

### **7.1 New Source Performance Standards**

EPA has established New Source Performance Standards (NSPS) for new, modified, or reconstructed facilities and source categories. Interstate is not a designated facility and has no equipment subject to any NSPS subparts.

### **7.2 National Emission Standards for Hazardous Air Pollutants**

#### **7.2.1 NESHAP Subpart M MMM Regulatory Review**

The spray coating of trailers at Interstate is not covered under NESHAP Subpart M MMM.

40 CFR Part 63, Subpart M MMM NESHAP: Surface Coating of Miscellaneous Metal Parts and Products

A miscellaneous metal parts and products surface coating facility is any facility engaged in the surface coating of any miscellaneous metal part or product. However, this category affects a miscellaneous metal parts and products surface coating facility that is a major source, or is located at a major source, or is part of a major source of HAP emissions. Since Interstate is not a major source and is not a major source of HAP emissions, this subpart does not apply to Interstate.

#### **7.2.2 NESHAP Subpart H H H H H H H Regulatory Review**

The spray coating of trailers is covered under NESHAP Subpart H H H H H H H.

40 CFR Part 63, Subpart H H H H H H H NESHAP: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources

§ 63.11169 What is the purpose of this subpart?

In accordance with §63.11169, subpart H H H H H H H establishes national emission standards for hazardous air pollutants (HAP) for area sources involved in auto body refinishing operations that encompass motor vehicle and mobile equipment spray-applied surface coating operations.

§ 63.11170 Am I subject to this subpart?

In accordance with §63.11170(a), this mobile equipment coating operation is subject to this subpart



because the facility will be operated as an area source of HAP. The facility is a source of HAP that is not a major source of HAP, is not located at a major source, and is not part of a major source of HAP emissions. In addition, the facility will perform one or more activities listed in this section, including spray application of coatings, as defined in §63.11180, to mobile equipment including operations that are located in stationary structures at fixed locations.

§ 63.11171 How do I know if my source is considered a new source or an existing source?

In accordance with §63.11171(b), the mobile equipment coating operation is the collection of mixing equipment; spray booths and associated equipment; spray guns and associated equipment; spray gun cleaning equipment; and equipment used for storage, handling, recovery, or recycling of cleaning solvent or waste paint. Paint stripping is not proposed as a business activity.

In accordance with §63.11171(c), this mobile equipment coating operation is an existing source because it commenced construction prior to September 17, 2007, by installing new surface coating equipment, and the new surface coating equipment will be used at a source that was actively engaged in miscellaneous surface coating prior to September 17, 2007.

§63.11172 When do I have to comply with this subpart?

In accordance with §63.11172(a)(2), because the initial startup of the facility occurred prior to January 9, 2008, the compliance date is January 10, 2011.

§63.11173 What are my general requirements for complying with this subpart?

Because the facility has not proposed paint-stripping activities, the requirements of §63.11173(a) through (f) are not applicable. Because the facility is a mobile equipment coating operation, in accordance with §63.11173(e), the permittee must meet the requirements of paragraphs (e)(1) through (e)(5) of this section. These sections are listed below. In accordance with §63.11173(f), each owner or operator of an affected mobile equipment coating operation must ensure and certify that all new and existing personnel, including contract personnel, who spray apply surface coatings, as defined in §53.11180, are trained in the proper application of surface coatings as required by paragraph (e)(1) of this section. The training program must include, at a minimum, the items listed in paragraphs (f)(1) through (f)(3) of this section.

§63.11173(e)(2), all spray-applied coatings must be applied in a spray booth, preparation station, or mobile enclosure that meets the requirements of paragraph (e)(2)(i) of this section and either paragraph (e)(2)(ii), (e)(2)(iii), or (e)(2)(iv) of this section.

(i) All spray booths, preparation stations, and mobile enclosures must be fitted with a type of filter

technology that is demonstrated to achieve at least 98-percent capture of paint overspray. The procedure used to demonstrate filter efficiency must be consistent with the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Method 52.1, "Gravimetric and Dust-Spot Procedures for Testing Air-Cleaning Devices Used in General Ventilation for Removing Particulate Matter, June 4, 1992" (incorporated by reference, see § 63.14 of subpart A of this part). The test coating for measuring filter efficiency shall be a high solids bake enamel delivered at a rate of at least 135 grams per minute from a conventional (non- HVLP) air-atomized spray gun operating at 40 pounds per square inch (psi) air pressure; the air flow rate across the filter shall be 150 feet per minute. Owners and operators may use published filter efficiency data provided by filter vendors to demonstrate compliance with this requirement and are not required to perform this measurement. The requirements of this paragraph do not apply to waterwash spray booths that are operated and maintained according to the manufacturer's specifications.

(ii) Spray booths and preparation stations used to refinish complete motor vehicles or mobile equipment must be fully enclosed with a full roof, and four complete walls or complete side curtains, and must be ventilated at negative pressure so that air is drawn into any openings in the booth walls or preparation station curtains. However, if a spray booth is fully enclosed and has seals on all doors and other openings and has an automatic pressure balancing system, it may be operated at up to, but not more than, 0.05 inches water gauge positive pressure.

(iii) Spray booths and preparation stations that are used to coat miscellaneous parts and products or vehicle subassemblies must have a full roof, at least three complete walls or complete side curtains, and must be ventilated so that air is drawn into the booth. The walls and roof of a booth may have openings, if needed, to allow for conveyors and parts to pass through the booth during the coating process.

(iv) Mobile ventilated enclosures that are used to perform spot repairs must enclose and, if necessary, seal against the surface around the area being coated such that paint overspray is retained within the enclosure and directed to a filter to capture paint overspray.

§63.11173(e) (3) All spray-applied coatings must be applied with a high volume, low pressure (HVLP) spray gun, electrostatic application, airless spray gun, airassisted airless spray gun, or an equivalent technology that is demonstrated by the spray gun manufacturer to achieve transfer efficiency comparable to one of the spray gun technologies listed above for a comparable operation, and for which written approval has been obtained from the Administrator. The procedure used to demonstrate that spray gun transfer efficiency is equivalent to that of an HVLP spray gun must be equivalent to the California South Coast Air Quality Management District's "Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989" and "Guidelines for Demonstrating Equivalency with District Approved Transfer Efficient Spray Guns, September 26, 2002" (incorporated by reference, see § 63.14 of subpart A of this part). The requirements of this paragraph do not apply to painting performed by students and instructors at paint training centers. The requirements of this paragraph do not apply to the surface coating of aerospace vehicles that

involves the coating of components that normally require the use of an airbrush or an extension on the spray gun to properly reach limited access spaces; to the application of coatings on aerospace vehicles that contain fillers that adversely affect atomization with HVLP spray guns; or to the application of coatings on aerospace vehicles that normally have a dried film thickness of less than 0.0013 centimeter (0.0005 in.).

§63.11173(e) (4) All paint spray gun cleaning must be done so that an atomized mist or spray of gun cleaning solvent and paint residue is not created outside of a container that collects used gun cleaning solvent. Spray gun cleaning may be done with, for example, hand cleaning of parts of the disassembled gun in a container of solvent, by flushing solvent through the gun without atomizing the solvent and paint residue, or by using a fully enclosed spray gun washer. A combination of non-atomizing methods may also be used.

§63.11173(e) (5) As provided in § 63.6(g), we, the U.S. Environmental Protection Agency, may choose to grant you permission to use an alternative to the emission standards in this section after you have requested approval to do so according to § 63.6(g)(2).

In accordance with §63.11173(g), as required by paragraph (e)(1) of this section, all new and existing personnel at an affected mobile equipment surface coating source, including contract personnel, who spray apply surface coatings, as defined in §63.11180, must be trained by the dates specified in paragraphs (g)(1) and (2) of this section. Employees who transfer within a company to a position as a painter are subject to the same requirements as a new hire.

§ 63.11174 What parts of the General Provisions apply to me?

In accordance with §63.11174(a), Table 1 of this subpart shows which parts of the General Provisions in subpart A apply.

In accordance with §63.11174(b), an owner or operator of an area source subject to this subpart is exempt from the obligation to obtain a permit under 40 CFR part 70 or 71 provided that a permit under 40 CFR 70.3(a) or 71.3(a) is not required for a reason other than becoming an area source subject to this subpart. This permit application and permitting action involve a Permit to Construct, and will not utilize the requirements and procedures in IDAPA 58.01.01.300-399 for the issuance of Tier I operating permits.

§ 63.11175 What notifications must I submit?

In accordance with §63.11175(a), because the facility is a surface coating operation subject to this subpart, the initial notification required by §63.9(b) must be submitted. For this existing operation,

the Initial Notification must be submitted no later than on or before March 11, 2011. In accordance with §63.11175(b), because the facility is an existing source, the permittee is not required to submit a separate notification of compliance status in addition to the initial notification specified in paragraph (a) of this subpart provided the permittee was able to certify compliance on the date of the initial notification, as part of the initial notification, and the permittee's compliance status has not since changed. The permittee must submit a Notification of Compliance Status on or before March 11, 2011. The permittee is required to submit the information specified in paragraphs (b)(1) through (4) of this section with the Notification of Compliance Status.

§ 63.11176 What reports must I submit?

In accordance with §63.11176(a), because the permittee is an owner or operator of a mobile equipment surface coating affected source, the permittee is required to submit a report in each calendar year in which information previously submitted in either the initial notification required by §63.11175(a), Notification of Compliance, or a previous annual notification of changes report submitted under this paragraph, has changed. Deviations from the relevant requirements in §63.11173(a) through (d) or §63.11173(e) through (g) on the date of the report will be deemed to be a change. The annual notification of changes report must be submitted prior to March 1 of each calendar year when reportable changes have occurred and must include the information specified in paragraphs (a)(1) through (2) of this section. Because the facility has not proposed to conduct paint stripping operations, the MeCl minimization plan requirements are not applicable.

§ 63.11177 What records must I keep?

In accordance with §63.11177, because the permittee is the owner or operator of a surface coating operation, the permittee must keep the records specified in paragraphs (a) through (d) and (g) of this section. Because the permittee has not proposed to conduct paint stripping operations, the requirements of paragraphs (e) and (f) of this section are not applicable.

§ 63.11178 In what form and for how long must I keep my records?

In accordance with 40 CFR 63.11178(a) because the permittee is the owner or operator of an affected source, the permittee must maintain copies of the records specified in §63.11177 for a period of at least five years after the date of each record. Copies of records must be kept on site and in a printed or electronic form that is readily accessible for inspection for at least the first two years after their date, and may be kept off-site after that two-year period.

§ 63.11179 Who implements and enforces this subpart?

In accordance with §63.11179(a), this subpart can be implemented and enforced by the U.S. Environmental Protection Agency (EPA), or a delegated authority. At the time of this permitting action, the EPA has not delegated authority to the State of Idaho. However, IDAPA 58.01.01.107.03i incorporates by reference all Federal Clean Air Act requirements including 40 CFR 63, Subpart HHHHHH. Therefore, the requirements of this subpart have been placed in the permit.

§ 63.11180 What definitions do I need to know?

Terms used in this subpart are defined in accordance with §63.11180.

### **7.2.3 NESHAP Subpart XXXXXX Regulatory Review**

The manufacturing of trailers at Interstate is not covered under NESHAP Subpart XXXXXX.

40 CFR Part 63, Subpart XXXXXX NESHAP: Area Source Standards for Nine Metal Fabrication and Finishing Source Categories

This rule applies to area sources where the primary activity of their facilities is in one of the following nine source categories: (1) Electrical and Electronic Equipment Finishing Operations; (2) Fabricated Metal Products; (3) Fabricated Plate Work (Boiler Shops); (4) Fabricated Structural Metal Manufacturing; (5) Heating Equipment, except Electric; (6) Industrial Machinery and Equipment Finishing Operations; (7) Iron and Steel Forging; (8) Primary Metal Products Manufacturing; and (9) Valves and Pipe Fittings.

Most of the listed activities clearly do not apply to Interstate. Although Interstate does perform some welding during its trailer assembly, its work is on prefabricated rails and parts. It does not fabricate structural metal and does not finish industrial machinery or equipment. Since Interstate does not perform the listed activities, this subpart does not apply to Interstate.

### **7.3 Prevention of Significant Deterioration**

Interstate's operations are not included in the list of 28 Prevention of Significant Deterioration (PSD) source categories. Therefore, to qualify as a PSD Major Source, the Interstate facility must have the Potential to Emit (PTE) greater than 250 tons per year of any NSR regulated pollutant. With this permit modification, VOC emissions, the NSR-regulated pollutant with the highest emission rate at the facility, are estimated at approximately 21 tons per year. Consequently, Interstate does not qualify as a PSD Major Source.

## **8. STATE OF IDAHO REGULATORY REVIEW**

### **8.1 Certification of Documents- 58.01.01.123**

Certification of the application documents is provided on form GI.

### **8.2 Demonstration of Preconstruction Compliance with Toxic Standards- 58.01.01.210**

Emission estimates for the potential non-carcinogenic and carcinogenic Toxic Air Pollutants (TAPs) emitted from the Interstate facility are calculated in Table 4-2, 4-3, 4-4, and Table 4-5 (above). The uncontrolled TAP emission rates are compared to the IDAPA 58.01.01.585-586 screening emission levels. Consequently, the requirements of Section 210 are satisfied.

### **8.3 Ambient Air Quality Standards for Specific Air Pollutants- 58.01.01.577**

Emissions estimates for the criteria pollutants emitted from the facility are summarized in Table 3-2 (above). The proposed emissions associated with the project are less than the General Modeling Thresholds established by the Idaho DEQ except for VOCs. In guidance provided by Darrin Mehr and Kevin Schilling of DEQ<sup>6</sup>, since all criteria pollutants other than VOCs were below the levels of Regulatory Concern (BRC)<sup>7</sup>, modeling of criteria pollutants is not necessary. Therefore, it is assumed that the ambient concentrations are below the ambient air quality standards specified in 58.01.01.575.

### **8.4 Toxic Air Pollutants Non-carcinogenic Increments – 58.01.01.585**

See Section 8.2.

### **8.5 Toxic Air Pollutants Carcinogenic Increments – 58.01.01.586**

See Section 8.2.

### **8.6 New Source Performance Standards – 58.01.01.590**

See Section 7.1.

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<sup>6</sup> Email correspondence Darrin Mehr, Idaho Department of Environmental Quality, to Neil Fox, TORF Environmental Management, June 13 and 16, 2014.

<sup>7</sup> Less than 10% of significant emission rates, IDAPA 58.01.01.221.

#### **8.7 National Emission Standards for Hazardous Air Pollutants – 58.01.01.591**

See Section 7.2.

#### **8.8 Visible Emissions – 58.01.01.625**

The facility is subject to this standard and will comply. There are no anticipated sources of visible emissions.

#### **8.9 Rules for Control of Fugitive Dust – 58.01.01.650**

The spray booth is equipped with fans and outlet filters to enclose, control and vent any particulate matter. The undercoating partially enclosed booth is equipped with a vinyl door and outlet filters to enclose, control and vent any particulate matter. The majority of the area around the facility buildings is paved. There are no stockpiles or vehicle loading, unloading, or transport of unpackaged, dusty materials. Dust from the wood cutting operations are controlled with bag filters.

#### **8.10 Fuel Burning Equipment- Particulate Matter – 58.01.01.675**

IDAPA 58.01.01.675 establishes exhaust gas particulate limits for fuel-burning equipment. The definition of “fuel-burning equipment” provided in IDAPA 58.01.01.006.45 is-

*Any furnace, boiler, apparatus, stack and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer.*

Consequently, the regulations IDAPA 58.01.01.676 and IDAPA 58.01.01.677 potentially apply.

#### **8.11 Fuel Burning Equipment- Particulate Matter – 58.01.01.676**

IDAPA 58.01.01.676 establishes exhaust gas particulate limits for fuel-burning equipment greater than ten (10) million BTU per hour. Since none of the heaters are greater than 10 million BTU per hour this regulation does not apply.

#### **8.12 Fuel Burning Equipment- Particulate Matter – 58.01.01.677**

IDAPA 58.01.01.677 establishes exhaust gas particulate limits for fuel-burning equipment less than ten (10) million BTU per hour. There are 10 natural gas space heaters and each is less than ten (10) million BTU per hour at the Interstate facility. Therefore, IDAPA 58.01.01.677 applies.

Estimated natural gas fuel consumption from all of these heaters running year-round at full nameplate rating is 3.43E-4 million cubic feet per hour (343 cubic feet) (Table 2-2). Estimated PM emissions from each heater running year-round at full nameplate rating is 0.003 lb/hr divided by 10 heaters = 0.0003 lbs./hr. Common low range air to fuel ratio for effective combustion of natural gas

is 8.5 parts air to fuel<sup>8</sup>, the amount of air and fuel would be 8.5+1, or 9.5 parts air and fuel for each part fuel. Since each heater would burn 34.3 cubic feet fuel per hour, 0.0003 lbs PM would be emitted with 325.9 cubic feet of flue gas, or 9.2 E-7 lbs/cubic foot. At 7,000 grains per lb., 0.006 grains/cubic foot is emitted. Since this is less than the PM standard .015 gr/dscf, these units comply.

### **8.13 Particulate Matter- Process Weight Limitation – 58.01.01.700**

In accordance with Table 6-1, the maximum estimated particulate emission rate associated with this permit is 0.351 lb/hr. This hourly rate is based on 208-day wood cutting, welding and paint booth operation and does not include fuel burning equipment (58.01.01.701.02).

In accordance with IDAPA 58.01.01.701.01.a (for units starting up after October 1, 1979):  
Allowable Particulate Emissions,  $E = 0.045(PW)^{0.60}$

The minimum Process Weight that will demonstrate compliance can be calculated:

$$E_{\text{actual}} = 0.351 \text{ lb/hr particulate} = 0.045(PW_{\text{minimum}})^{0.60}$$
$$\text{Minimum PW} = 30.68 \text{ lb/hr}$$

Process Weight includes the weight of all material entering the source. In Interstate's case, process weight includes the weight of the wood cut, weight of the steel welded, and the weight of the steel rails, trailer frame, coatings, and solvents entering the paint booths. The weight of these materials easily exceeds the compliance minimum of 45.7 lb/hr. Therefore, the facility meets the standards listed in IDAPA 58.01.01.701.

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<sup>8</sup> [http://www.engineeringtoolbox.com/fuels-air-flue-gas-d\\_170.htm](http://www.engineeringtoolbox.com/fuels-air-flue-gas-d_170.htm)

**9. CERTIFICATION**

I hereby certify that based upon information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

Kevin Bennett  
\_\_\_\_\_  
(printed name)

Operations Manager  
\_\_\_\_\_  
(title)

  
\_\_\_\_\_  
(signature)

6-15-2016  
\_\_\_\_\_  
(date)

oOo

## Appendix A Safety Data Sheets





Pinnacle Alloys are products of SOWESCO

## PREMIER S-6 DATA SHEET

### PREMIER S-6

AWS CLASS ER70S-6

#### CODE AND SPECIFICATION DATA:

AWS A5.18 ASME SFA 5.18; CWB APPROVED

#### DESCRIPTION:

PREMIER S-6 is a premium carbon steel, "MIG wire", electrode formulated for welding carbon steels with a yield strength range of 55,000-70,000 psi. PREMIER S-6 is well suited for steels containing medium to high levels of mill scale and mild amounts of contaminants. The wire's copper coating promotes excellent feeding characteristics. PREMIER S-6 is a good selection for weldments requiring better tie-in and wetting than possible with a 70S-3 electrode. It is a terrific choice for welding pressure vessels, structural steel, pipe, steel buildings, and automotive repair.

#### CHARACTERISTICS:

- Has higher manganese and silicon for improved performance over scaled plate.
- Excellent feedability and welder appeal.
- Extremely stable and consistent arc transfer.
- Achieves high wire feed speeds without problems.

**SHIELDING GAS:** 100% CO<sub>2</sub>, 75-95% Ar/balance CO<sub>2</sub>, 95-98% Ar/balance O<sub>2</sub>, 30-50 cfh

**DIAMETERS:** .023", .030", .035", .045", .052", 1/16"

**WELDING POSITIONS:** All positions

#### TYPICAL DEPOSIT COMPOSITION (Wt %):

Carbon (C)	0.08
Copper (Cu)	0.18
Manganese (Mn)	1.53
Phosphorous (P)	0.009
Silicon (Si)	0.88
Sulfur (S)	0.01

#### TYPICAL MECHANICAL PROPERTIES (CO<sub>2</sub>):

Ultimate Tensile Strength (psi)	80,900 psi
Yield Strength (psi)	68,100 psi
Percent Elongation	28%
CVN (ft•lb <sub>f</sub> ) @ -20°F	68 ft•lbs



Pinnacle Alloys are products of SOWESCO

**TYPICAL SPRAY ARC WELDING PARAMETERS (95-98% Ar/balance O<sub>2</sub>):**

Diameter	WFS (ipm)	Amperage	Volts	WFS (ipm)	Amperage Range	Volts Range
.035"	<b>550</b>	<b>200</b>	<b>29-30</b>	350-750	180-240	24-35
.045"	<b>410</b>	<b>255</b>	<b>29-30</b>	240-600	180-330	27-33
.052"	<b>350</b>	<b>300</b>	<b>29-30</b>	220-620	220-460	25-35
1/16"	<b>300</b>	<b>360</b>	<b>29-30</b>	175-500	240-520	26-37

**TYPICAL SHORT ARC WELDING PARAMETERS (for out of position welding):**

Diameter	WFS (ipm)	Amperage	Volts	WFS (ipm)	Amperage Range	Volts Range
.023"	<b>300</b>	<b>70</b>	<b>15</b>	150-380	45-90	14-16
.030"	<b>220</b>	<b>100</b>	<b>15</b>	150-350	60-140	14-16
.035"	<b>250</b>	<b>130</b>	<b>17</b>	180-300	90-160	15-19
.045"	<b>150</b>	<b>160</b>	<b>18</b>	125-200	130-200	17-19
.052"	<b>140</b>	<b>160</b>	<b>18</b>	135-190	150-200	17-20

**NOTE:** Optimum conditions are in boldface type. DCEP (Electrode Positive): Flow rates of 25-45 CFH are required.

**NOTICE:** The results reported are based upon testing of the product under controlled laboratory conditions in accordance with American Welding Society Standards. Actual use of the product may produce different results due to varying conditions. An example of such conditions would be electrode size, plate chemistry, environment, weldment design, fabrication methods, welding procedure and service requirements. Thus the results are not guarantees for the use in the field. The manufacturer disclaims any warranty of merchantability of fitness for any particular purpose with respect to its products.

**CAUTION:** Consumers should be thoroughly familiar with the safety precautions on the warning label posted in each shipment and in the American National Standards A49.1, "Safety in Welding and Cutting," published by the American Welding Society, 550 NW LeJune Road, Miami, FL 33126: OSHA Safety and Health Standards 29 CFR 1910 is available from the U.S. Department of Labor, Washington, D.C. 20210.

Pinnacle Alloys MSDS sheet may be obtained at [www.pinnaclealloys.com](http://www.pinnaclealloys.com).



Pinnacle Alloys are products of SOWESCO

ISO 9001:2008 CERTIFIED  
 CERTIFICATE NO.: 50040 & 50415

## ACTUAL TEST REPORT

<b>CUSTOMER'S PURCHASE ORDER NUMBER</b>		<b>SOLD TO</b>	<b>SHIP TO</b>
635407		NORCO	NORCO
<b>SALES ORDER NUMBER</b>		P.O. BOX 15299	P.O. BOX 15299
W59011		BOISE , ID 83715	BOISE , ID 83715
<b>CERTIFICATE DATE</b>	<b>SHIP DATE</b>		
4/15/2016	4/15/2016		

<b>DESCRIPTION OF MATERIAL</b>	<b>HEAT NUMBER</b>	<b>LOT NUMBER</b>
PREMIER S-6 (ER70S-6) .035" X 44# MIG	0156743	1601004

CHEMICAL ANALYSIS - PERCENTAGE OF EACH									
C	Cr	Cu	Mn	Mo	Ni	P	S	Si	V
0.0700	0.0300	0.1500	1.5400	0.0048	0.0100	0.0140	0.0120	0.9000	0.0032
<b>FERRITE</b>	<b>Shaeffler</b>	<b>DeLong</b>	<b>WRC92</b>	<b>RADIOGRAPHIC TEST:</b>					
	N/A	N/A	N/A	Passed					

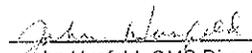
TYPICAL MECHANICAL PROPERTIES		
<b>TENSILE STRENGTH</b>	<b>YIELD STRENGTH</b>	<b>ELONGATION IN 2"</b>
> 83,833 psi	> 71,650 psi	> 30%
<b>TYPICAL CHARPY IMPACT</b>		
> 75 FT LBS (101 J) @ -22 F (-30 C)		

SPECIFICATIONS	CLASSIFICATION	PART NUMBER
AWS A5.18/ASME SFA 5.18	ER70S-6	03570S6M44
<b>QUANTITY</b>		
31680 Lbs.		

REMARKS
Heat/Lot PMI Verified

We verify that the stated chemical analysis is compliant with the applicable AWS specification and classification. Flux bearing products will be warranted against non-conformance for no more than six (6) months from the original date of sale by SOWESCO. Non-flux bearing products will be warranted for no more than twelve (12) months from the original date of sale by SOWESCO. Pinnacle Alloys products are approved under a continual Quality Assurance Program audited and certified by the American Bureau of Shipping (ABS Quality Evaluations).

1492

  
 John Husfeld, QMS Director

# PURE ASPHALT CO. SAFETY DATA SHEET (SDS)

## SECTION 1: IDENTIFICATION

<b>Product Names</b>	#9970 Alkyd Primer
<b>Other Names</b>	Solvent Base Primer Paint
<b>Use</b>	Corrosion inhibiting primer
<b>Company</b>	Pure Asphalt Co. 3455 W. 31st Place Chicago, IL Tel: (773) 247-7030 Fax: (773) 247-7066
<b>Emergency Tel.</b>	ChemTrec 800-262-8200

## SECTION 2: HAZARD(S) IDENTIFICATION

<b>GHS HAZARD CLASSIFICATION:</b>		
<b>Physical Hazards</b>	Flammable Liquid	Category 2
<b>Health Hazards</b>	Skin irritation	Category 2
	Eye irritation	Category 2
	Target organ toxicity, repeat exposure	Category 2

**LABEL ELEMENTS:**



**Signal Word**      Danger

**Hazard Statements**

H226:	Highly Flammable liquid and vapour
H315:	Causes skin irritation
H320:	Causes eye irritation
H373:	May cause damage to organs through prolonged or repeated exposure

**Precautionary statements**

<b>Prevention</b>	P210:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.		
	P233:	Keep container tightly closed.		
	P240:	Ground and bond container and receiving equipment.		
	P241:	Use explosion-proof electrical and lighting equipment.		
	P242:	Use only non-sparking tools.		
	P243:	Take precautionary measures against static discharge.		
	P280:	Wear protective gloves, protective clothing, eye protection, and face protection.		
	P260:	Do not breathe mist or spray.		
	P270:	Do not eat, drink or smoke when using this product.		
	P264:	Wash exposed areas thoroughly after handling.		
	<b>Response</b>	P370+378:	IN CASE OF FIRE: Use carbon dioxide (CO2), alcohol foam, water fog or dry chemical to extinguish. DO NOT use stream/jet of water as this will spread fire.	
P303+361+353:		IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.		
P302+352:		IF ON SKIN: Wash with plenty of soap and water.		
P321:		Specific treatment: Apply hand or body lotion to reduce irritation.		
P332+313:		If skin irritation occurs: Get medical advice or attention.		
P362+364:		Take off contaminated clothing and wash it before reuse.		
P305+351+338:		IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.		
P337+313:		If eye irritation persists get medical advice and/or attention.		
<b>Storage</b>	P314:	Get Medical advice/attention if you feel unwell.		
	P331:	Do NOT induce vomiting.		
<b>Storage</b>	P403+235:	Store in a well ventilated place. Keep cool.		
<b>Disposal</b>	P501:	Dispose of contents and container in accordance with local, regional, national, and international regulation.		
<b>Canadian WHMIS</b>	Class B Division 2	Flammable liquid		
<b>SECTION 3: COMPOSITION INFORMATION ON HAZARDOUS INGREDIENTS</b>				
<b>Mixture</b>				

Chemical Name	Common Name	CAS number	Percent by weight
Naphtha, (petroleum) light aliphatic	VM&P Naphtha	64742-89-8	10-20%
Naphtha, (petroleum) hydrotreated light	Naphtha	64742-49-0	10-20%
Xylene (HAP)	Xylol	1330-20-7	1-4%
Hexone (HAP)	MIBK	108-10-1	0-2%
2-Butanone	MEK	78-93-3	0-2%

**SECTION 4: FIRST-AID MEASURES**

<b>General Advice</b>	Take off immediately all contaminated clothing. Get Medical advice/attention if you feel unwell. Wash contaminated clothing before reuse.
<b>Inhalation</b>	Remove person to fresh air and keep comfortable for breathing. Get Medical attention if you feel unwell.
<b>Skin</b>	Take off immediately all contaminated clothing and wash it before reuse. Wash with plenty of soap and water. If skin irritation or a rash occurs: Get medical advice/attention.
<b>Eye</b>	Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do and continue rinsing. If eye irritation persists: Get medical attention.
<b>Ingestion</b>	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Get Medical advice and/or attention if you feel unwell.
<b>Most important symptoms/effects, acute and delayed</b>	Eye irritation. Symptoms may include stinging, tearing, redness, swelling and blurred vision. Skin irritation: May cause redness, itching and/or pain. Inhalation of mist/vapors: Prolonged or repeated exposure may cause chronic effects.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically.

**SECTION 5: FIRE-FIGHTING MEASURES**

<b>Suitable Extinguisher type(s)</b>	Use carbon dioxide (CO <sub>2</sub> ), alcohol foam, water fog or dry chemical to extinguish.
<b>Unsuitable Extinguisher type</b>	Do not use stream or jet of water as this will spread fire.
<b>Specific hazardous arising from fire.</b>	Vaporized material may form explosive mixture with air. Thermal decomposition (burning) will produce oxides of carbon including carbon monoxide and may also produce irritating, corrosive and/or toxic gases, vapors and fumes.
<b>Special protective equipment for fire fighting.</b>	Self-contained breathing apparatus and full protective gear must be worn in case of fire.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

<b>Leak or spill procedures</b>	Remove all sources of ignition. Provide adequate ventilation.
<b>Containment</b>	Contain and absorb with inert material. (e.g. oil dry, sand)
<b>Cleanup</b>	Dispose in accordance with all local, state and federal regulations.
<b>Precautions</b>	In the event of a large spill, contain material and recover for use if possible. Avoid discharge into drains, water courses and the ground.

**SECTION 7: HANDLING AND STORAGE**

<b>Storage</b>	Keep away from ignition sources. Keep containers tightly closed. Store in a cool, dry and well ventilated area.
<b>Handling</b>	Avoid prolonged or repeated skin contact and avoid breathing vapors.
<b>Incompatible Contaminants</b>	Avoid exposure to oxidizing agents.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

<b>Ingredient</b>	<b>CAS #</b>	<b>OSHA PEL</b>	<b>ACGIH TLV-TWA</b>
<b>Naphtha, light aliphatic</b>	64742-89-8	500 ppm	300 ppm
<b>Naphtha, hydrotreated light</b>	64742-49-0	300 ppm	300 ppm
<b>Xylene (HAP)</b>	1330-20-7	100 ppm	100 ppm
<b>Hexone (HAP)</b>	108-10-1	100 ppm	50 ppm
<b>2-Butanone</b>	78-93-3	200 ppm	200 ppm

<b>Engineering Controls</b>	Use with adequate ventilation.
<b>PPE</b>	Eye/Face: Face shield, goggles Skin: Chemical protective gloves. Respiratory: Level of exposure needs to be determined. If required, use a particulate filter, a NIOSH-approved air purifying respirator with organic vapor cartridge or a supplied air respirator.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	
<b>Form</b>	Liquid
<b>Color</b>	Gray
<b>Flammability Limits</b>	
<b>Upper</b>	~7.0%
<b>Lower</b>	~0.9%
<b>Odor</b>	Mild Petroleum Odor
<b>Odor Threshold</b>	Not Determined

<b>Vapor Pressure at 20°C</b>	<10.4 kPa			
<b>pH</b>	Not applicable			
<b>Vapor Density (air=1)</b>	>1			
<b>Evaporation Rate</b>	Not Determined			
<b>Specific Gravity, 16°C</b>	1.027			
<b>Melting Point/Range</b>	Not Determined			
<b>Boiling Point/Range</b>	Not Determined			
<b>Solubility</b>	Insoluble			
<b>Partition Coefficient</b>	Not Determined			
<b>Flash Point</b>	16°F to 77°F (-9°C to 25°C)			
<b>Flammability</b>	Category 2			
<b>Auto ignition Temperature</b>	Not Determined			
<b>Decomposition Temperature</b>	Not Determined			
<b>Viscosity</b>	> 200 mm <sup>2</sup> /sec			

**SECTION 10: STABILITY AND REACTIVITY**

<b>Reactivity</b>	
<b>Chemical Stability</b>	Stable
<b>Other</b>	
<b>Hazardous Reactions</b>	Combustion
<b>Polymerization</b>	Will not occur.
<b>Conditions to Avoid</b>	Strong oxidizing agents: sources of ignition.
<b>Incompatible Materials</b>	Strong oxidizing agents
<b>Decomposition Hazards</b>	Combustion products: Oxides of carbon, nitrogen, and sulfur and potentially irritating and/or toxic fumes.

**SECTION 11: TOXICOLOGICAL INFORMATION**

<b>No product toxicological information is available.</b>				
<b>Ingredient</b>		<b>CAS#</b>	<b>LD50</b>	<b>LC50</b>
Naphtha, light aliphatic		64742-89-8	Rat: > 8.0 g/kg	Rat: 3400 ppm; 4 h
Naphtha, hydrotreated light		64742-49-0	Rat: > 8.0 g/kg	Rat: 3400 ppm; 4 h
Xylene (HAP)		1330-20-7	Rat: 3.5-8.6 g/kg	Rat: 5000 ppm; 4 h
Hexone (HAP)		108-10-1	Rat: 2.08 g/kg	Rat: 100g/m <sup>3</sup>
2-Butanone		78-93-3	Rat: 2.737 g/kg	Rat: 23.5g/m <sup>3</sup> ; 8 h
<b>Routes of Exposure</b>				
<b>Inhalation</b>	May cause damage to organs through prolonged or repeated exposure			
<b>Ingestion</b>	Expect low ingestion hazard. Do NOT induce vomiting.			
<b>Skin Contact</b>	Causes skin irritation			
<b>Eye Contact</b>	Causes eye irritation			
<b>Delayed, Immediate, and Long Term Exposure</b>				
	Prolonged or repeated inhalation of petroleum distillates may cause damage to organs.			
<b>Carcinogenicity</b>				
	Hexone (MIBK) is classified by IARC as Group 2B, "Possibly carcinogenic to humans"			

**SECTION 12: ECOLOGICAL INFORMATION**

**Eco toxicity**

This mixture contains components that are potentially toxic to freshwater and saltwater ecosystems.

**Environmental Fate**

This material may be harmful to aquatic organisms and may cause long term adverse effects in the aquatic environment.

**SECTION 13: DISPOSAL CONSIDERATIONS**

Hazard characteristic and regulatory waste classification can change with product use. Accordingly, it is the responsibility of the user to determine the proper handling and disposition for disposal according to local, state, federal and international regulations.

**SECTION 14: TRANSPORT INFORMATION**

**For Industrial/Professional Use Only-Keep out of reach of Children**

**DOT**

**Proper shipping name:** Paint

**Identification Numbers:** UN1263

**Class or Division:** 3

**Packing Group:** II

**Label Codes:** 3

**Special Provisions:** 149, 367, B52, IB2, T4, TP1, TP8, TP28

**Packaging**

**Exceptions:** 173.150

**Non-Bulk:** 173.173

**Bulk:** 173.242

**Quantity Limitations**

**Passenger Aircraft/Rail:** 5 L

**Cargo Aircraft Only:** 60L

**Vessel Stowage**

**Location:** B

**Other:**

**SECTION 15: REGULATORY INFORMATION**

**TSCA** All components are listed or exempt from listing on the TSCA inventory.

**Sara Title III, Section 313** No, None

**Sara Title III, Section 311, 312** Fire Hazard

**SECTION 16: OTHER INFORMATION**

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind expressed or implied is made with respect to the information contained herein.

# MATERIAL SAFETY DATA SHEET

ACETONE/SW  
17 00

DATE OF PREPARATION  
May 7, 2016

## SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NUMBER

ACETONE/SW

### PRODUCT NAME

Acetone

### MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY  
101 Prospect Avenue N.W.  
Cleveland, OH 44115

### Telephone Numbers and Websites

Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)	

## SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
100	67-64-1	Acetone	ACGIH TLV ACGIH TLV OSHA PEL	180 mm
			500 PPM 750 PPM STEL 1000 PPM	

## SECTION 3 — HAZARDS IDENTIFICATION

### ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.  
EYE or SKIN contact with the product, vapor or spray mist.

### EFFECTS OF OVEREXPOSURE

**EYES:** Irritation.  
**SKIN:** Prolonged or repeated exposure may cause irritation.

**INHALATION:** Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

### SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.  
Redness and itching or burning sensation may indicate eye or excessive skin exposure.

### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

### CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

### HMIS Codes

Health	1
Flammability	3
Reactivity	0

## SECTION 4 — FIRST AID MEASURES

**EYES:** Flush eyes with large amounts of water for 15 minutes. Get medical attention.

**SKIN:** Wash affected area thoroughly with soap and water.

Remove contaminated clothing and launder before re-use.

**INHALATION:** If affected, remove from exposure. Restore breathing. Keep warm and quiet.

**INGESTION:** Do not induce vomiting. Get medical attention immediately.

## SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT  
1 °F PMCC

LEL  
2.6

UEL  
12.8

FLAMMABILITY CLASSIFICATION  
RED LABEL -- Extremely Flammable, Flash below 21 °F (-6 °C)

**EXTINGUISHING MEDIA**

Carbon Dioxide, Dry Chemical, Foam

**UNUSUAL FIRE AND EXPLOSION HAZARDS**

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

**SPECIAL FIRE FIGHTING PROCEDURES**

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

**SECTION 6 — ACCIDENTAL RELEASE MEASURES**

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

**SECTION 7 — HANDLING AND STORAGE**

**STORAGE CATEGORY**

DOL Storage Class IB

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE**

Contents are **EXTREMELY FLAMMABLE**. Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally.

Keep out of the reach of children.

**SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION**

**PRECAUTIONS TO BE TAKEN IN USE**

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

**VENTILATION**

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

**RESPIRATORY PROTECTION**

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

**PROTECTIVE GLOVES**

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

**EYE PROTECTION**

Wear safety spectacles with unperforated sideshields.

**OTHER PRECAUTIONS**

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

<b>PRODUCT WEIGHT</b>	6.59 lb/gal	789 g/l
<b>SPECIFIC GRAVITY</b>	0.79	
<b>BOILING POINT</b>	132 - 134 °F	55 - 56 °C
<b>MELTING POINT</b>	Not Available	
<b>VOLATILE VOLUME</b>	100%	
<b>EVAPORATION RATE</b>	Slower than ether	
<b>VAPOR DENSITY</b>	Heavier than air	
<b>SOLUBILITY IN WATER</b>	Not Available	
<b>VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)</b>		
0.00 lb/gal	0 g/l	Less Water and Federally Exempt Solvents
0.00 lb/gal	0 g/l	Emitted VOC

**SECTION 10 — STABILITY AND REACTIVITY****STABILITY — Stable****CONDITIONS TO AVOID**

None known.

**INCOMPATIBILITY**

None known.

**HAZARDOUS DECOMPOSITION PRODUCTS**

By fire: Carbon Dioxide, Carbon Monoxide

**HAZARDOUS POLYMERIZATION**

Will not occur

**SECTION 11 — TOXICOLOGICAL INFORMATION****CHRONIC HEALTH HAZARDS**

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

**TOXICOLOGY DATA**

CAS No.	Ingredient Name	LC50 RAT	LD50 RAT	4HR	Not Available
67-64-1	Acetone				
					5800 mg/kg

**SECTION 12 — ECOLOGICAL INFORMATION****ECOTOXICOLOGICAL INFORMATION**

No data available.

**SECTION 13 — DISPOSAL CONSIDERATIONS****WASTE DISPOSAL METHOD**

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

**SECTION 14 — TRANSPORT INFORMATION**

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

**US Ground (DOT)**

1 Liter (1.1 Quarts) and Less may be Classed as LTD. QTY. (PAINT OR RELATED).

Larger Containers are Regulated as:

UN1090, ACETONE, 3, PG II, (ERG#127)

**DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities**

Acetone 5000 lb RQ

**Bulk Containers may be Shipped as (check reportable quantities):**

UN1090, ACETONE, 3, PG II, (ERG#127)

**Canada (TDG)**

UN1090, ACETONE, 3, PG II, (ERG#127)

**IMO**

1 Liter (1.1 Quarts) and Less may be Shipped as Limited Quantity.

UN1090, ACETONE, 3, PG II, (-17 C c.c.), EmS F-E, S-D

**IMO**

1 Liter (1.1 Quarts) and Less may be Shipped as Limited Quantity.

UN1090, ACETONE, 3, PG II, (-17 C c.c.), EmS F-E, S-D

**IATA/CAO**

UN1090, ACETONE, 3, PG II

**SECTION 15 — REGULATORY INFORMATION****SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION**

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
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No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.

**CALIFORNIA PROPOSITION 65**

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

**TSCA CERTIFICATION**

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

**SECTION 16 — OTHER INFORMATION**

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

Issue Date 1-July-2013

Revision Date 1-Nov-2014

Version 1

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: AEROGREEN 4110 Paint Prep

Other Means of Identification Aero-Green, Paint Prep,  
SDS # 4110

### Recommended Use of the Chemical and Restrictions on Use Recommended Use

### Details of the Supplier of the Safety Data Sheet

#### Supplier Address

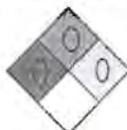
Hi-Lite Solutions  
P.O. Box 399  
1285 Brucetown Road  
Clear Brook VA 22624

### Emergency Telephone Number

Company Phone Number 1-540-450-8375  
Emergency Telephone 1-540-450-8375

## 2. HAZARDS IDENTIFICATION

Emergency Overview: This is a green colored liquid with a slight characteristic odor.

NFPA/HMIS Rating:Health, Fire, Reactivity, and Special = 0 =minimal

### Potential Health Effects

Eye Contact: Mildly irritating.

Skin Contact: No adverse effects expected under typical use conditions. Prolonged exposure may cause dryness.

Chemically sensitive individuals may experience mild irritation.

Ingestion: May cause stomach or intestinal irritation if swallowed.

Inhalation: No adverse effects expected under typical use conditions. Adequate ventilation should be present for prolonged usage in small enclosed areas.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### No hazardous ingredients.

Composition comments The manufacturer lists no ingredients as hazardous according to OSHA 29 CFR 1910.1200. Composition Data Sheets (CDS) are available upon request identifying all ingredients.

\*\*\* As outlined in "The Hazard Communication Standard (HCS) (29 CFR 1910.1200(g)), revised in 2012," states that the chemical name and concentration (i.e. exact percentage) of all ingredients which are classified as health hazards and are: Present above their cut-off/concentration limits or Present a health risk below the cut-off/concentration limits are to be listed .

### 4. FIRST AID MEASURES

#### First Aid Measures

Inhalation	If adverse effect occurs, move to fresh air
Eye Contact	Flush with plenty of water. After 5 minutes of flushing, remove contact lenses, if present. Continue flushing for at least 10 more minutes. If irritation persists seek medical attention.
Ingestion	Drink plenty of water to dilute.
Skin Contact	If adverse effect occurs, rinse skin with water.

#### Indication of any Immediate Medical Attention and Special Treatment Needed

**Note to Physicians** This is relatively innocuous substance not expected to cause harm. Should treatment ever be required, it would be directed at control of symptoms.

### 5. FIRE-FIGHTING MEASURES

This formula is stable, non-flammable, and will not burn. No special procedures necessary

Flammability:	Non-flammable
Flash Point:	Non-flammable
Suitable Extinguishing Media:	Use Dry chemical, CO2, water spray or "alcohol" foam.
Extinguishing Media to Avoid	High volume jet water.
Special Exposure Hazards:	In event of fire created carbon oxides, oxides of phosphorus may be formed.
Special Protective Equipment:	Wear positive pressure self-contained breathing apparatus; Wear full protective clothing.

#### Specific Hazards Arising from the Chemical

None known. Cool containers exposed to flames with water until well after the fire is out.

#### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment and Emergency Procedures

<b>Personal Precautions</b>	See Section # 8. Personal Protection: Use personal protective equipment as required.
<b>Environmental Precautions</b>	Do not allow into open waterways or ground water systems..
<b>Methods Cleaning Up</b>	Dilute with water and rinse into sanitary sewer system or soak up with inert absorbent material.

## 7. HANDLING AND STORAGE

### Precautions for Safe Handling

<b>Storage Conditions</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.
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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Exposure Guidelines</b>	OSHA PEL	ACGIH TLV
	No reportable ingredients	

### Appropriate Engineering Controls

<b>Engineering Controls</b>	Provide natural or mechanical ventilation to control exposure levels below airborne exposure limits. Showers. Eyewash stations.
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### Individual Protection Measures, such as Personal Protective Equipment



**Skin and Body Protection:** Butyl rubber or other impervious gloves should be used for prolonged exposure or for dermal sensitive individuals are required.



**Eye/Face Protection:** Wear approved safety goggles if splashing or spray back is likely.

**Respiratory:** Use in well ventilated area. Use suitable respiratory protective device in case of insufficient ventilation

**General Hygiene Considerations:** Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on Basic Physical and Chemical Properties

Physical State	Liquid
Appearance	Green Liquid
Color	Green
Odor	Slight Characteristic Odor
Odor Threshold	Not Determined
Bolling Point	F: 212 C: 100
Evaporation Rate	
Basis (Butyl Acetate-1)	<1
Solubility in Water	100%
Freezing Point	F: <32 C: <0
Percent Solid By Weight	Not Established
pH of Concentrate	11.8-12.4
pH of Diluted 1:3 with water	10.9-11.9
Vapor Pressure (mmHg)	
20@14.2 mmHg	F:77
Vapor Density (Air=1)	0.62
Specific Gravity (H2O=1)	1.01
VOC SCAQMD Method 313.91	
In Concentrate	30 gm/l
Diluted 2:1 with water	10 gm/l
VOC Content by Weight	0.2536662132 at 30 gm/l
Diluted 2:1 with water	0.083454044518 at 10 gm/l
Conductivity	0.0005 to 0.05
Weight Per Gallon	8.45 lbs/per gallon

## 10. STABILITY AND REACTIVITY

### Reactivity

Not reactive under normal conditions

### Chemical Stability

Stable under recommended storage conditions.

### Possibility of Hazardous Reactions

None under normal processing.

### Conditions to Avoid

None under normal conditions

### Incompatible Materials

None Known

### Hazardous Decomposition Products

Normal products of combustion-Co, Co2.

## 11. TOXICOLOGICAL INFORMATION

Effects of Exposure: Not expected to be hazardous under typical use conditions

Acute Toxicity:	Oral $LD_{50}$ (rat)	>5 g/kg body weight
	Dermal $LD_{50}$ (rabbit)	>5 g/kg body weight

Calculated via OECD Harmonized Integrated Classification System for Human Health & Environmental Hazards of Chemical Substance & Mixtures

**Eye Contact** Avoid contact with eyes. Minimal irritant per Ocular Irritation @assay modeling.  
No animal testing performed.

**Skin Contact** May cause dryness and irritation. Non-irritant per dermal irritation@ assay modeling.  
No animal testing performed.

**Carcinogens:** No ingredients are listed by OSHA, IARC, or NTP as known or suspected carcinogens

## 12. ECOLOGICAL INFORMATION

**Aquatic Toxicity:** Low, based on OECD 201, 202, 203 + Microtox: EC<sub>50</sub> & IC<sub>50</sub> > 100 Mg/L

**Terrestrial Toxicity:** Low, based on toxicology profile

**Persistence and degradability:** Readily Biodegradable per 49 CFR 796.3100 Aerobic Aquatic Biodegradation

**Mobility:** No Data Available.

**Bioaccumulation:** Not Applicable

**Other Adverse Effects** Not determined

## 13. DISPOSAL CONSIDERATIONS

### Waste Treatment Methods

**Disposal of Wastes** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated Packaging** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Unused Product:**

- \* Dilute with water and dispose by sanitary sewer.
- \* Used product may be hazardous depending on the cleaning application and resulting Contaminants.

**Empty Containers:**

- \* Triple-rinse with water and offer for recycling if available in your area.

\* \*Dispose of used or unused product, and empty containers in accordance with the local, State, Provincial, and Federal Regulations for your location. Never dispose of used degreasing water, containing low concentrations of contaminants, resulting from the cleaning of containers etc. into lakes, streams, and open bodies of water or storm drains.

## 14. TRANSPORT INFORMATION

**Note** Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances

U.S. (DOT)/ Canadian TDG:	Not Regulated for shipping.
IMO/IDMG:	Not classified as Hazardous
ICAO/IATA:	Not classified as Hazardous
ADR/RID:	Not classified as Hazardous
U.N. Number:	Not applicable
Proper Shipping Name:	Detergent/Cleaning Solution
Shipping Class:	55
Hazard Class:	Non-Hazardous
Marine Pollutant:	

### 15. REGULATORY INFORMATION

**All components are listed on: EINECS, TSCA, DSL, AICS and NZIoC Inventory.**

SARA Title III:

Sections 311/313 –Not applicable.

Sections 313 –Not applicable.

Sections 302 –Not applicable.

State Right To Know Lists:

No ingredients listed.

CA Prop 65:

None listed

WHMIS Classification:

Non Hazardous, not classifiable

Name

Toxic Substance List- Schedule 1 CEPA

NPRI Inventory

NO

No

NO

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by Canada's Controlled Products Regulation.

### 16. OTHER INFORMATION

Part Number	Size	Warranty1 (one) Year Shelf Life
4110-QT	32-ounce bottle 12/case	Batch Code: Containers of this formula will be batch coded as follows: Lot # 111213 where
4110-Gal	Gallon Bottle 4/case	"1" Number of Batch Produced
4110-PI	5- Gallon Pail	"11" Month Batch is Produced
4110-Dr	55-Gallon Drum	"21" Day in the Month Batch is produced
4110-275T	275 Gallon Tote	"3" is the last digit of the year product produced
4110-330T	330 Gallon Tote	

.Prepared/Revised by: Hi-Lite Solutions Inc, Regulatory Department  
This SDS has been revised in the following sections: ALL

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet



Revision Number: 002.0

Issue date: 12/15/2014

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	LOC PSS 10.0OZ ACWS ALM 12CC	IDH number:	1507598
Product type:	Sealant	Region:	United States
Restriction of Use:	None identified	Contact information:	
Company address:		Telephone:	+1 (800) 624-7767
Henkel Corporation		MEDICAL EMERGENCY Phone:	Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711
One Henkel Way		TRANSPORT EMERGENCY	Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887
Rocky Hill, Connecticut 06067			

### 2. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

**WARNING:** ABRASION COULD RELEASE RESPIRABLE PARTICLES OF SILICA QUARTZ, A CANCER HAZARD BY INHALATION. NORMAL USE OF THIS PRODUCT CAUSES NO SUCH RELEASE.

CAUSES SERIOUS EYE IRRITATION.

#### HAZARD CLASS

EYE IRRITATION

#### HAZARD CATEGORY

2A

#### PICTOGRAM(S)



#### Precautionary Statements

<b>Prevention:</b>	
<b>Response:</b>	Wash thoroughly after handling. Wear eye and face protection.
<b>Storage:</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. If eye irritation persists: Get medical attention.
<b>Disposal:</b>	Not prescribed

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Limestone	1317-65-3	30 - 60
Titanium dioxide	13463-67-7	1 - 5
Quartz (SiO <sub>2</sub> )	14808-60-7	0.1 - 1

IDH number: 1507598

Page 1 of 6

Product name: LOC PSS 10.0OZ ACWS ALM 12CC

\* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

#### 4. FIRST AID MEASURES

Inhalation:	Move to fresh air. If symptoms persist, seek medical advice.
Skin contact:	Wash affected area immediately with soap and water. If symptoms develop and persist, get medical attention.
Eye contact:	In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.
Ingestion:	Rinse out mouth. Do not drink. Never give anything by mouth to an unconscious person. If adverse health effects develop seek medical attention.
Symptoms:	See Section 11.

#### 5. FIRE FIGHTING MEASURES

Extinguishing media:	Water spray (fog), foam, dry chemical or carbon dioxide.
Special firefighting procedures:	Water may be unsuitable as an extinguishing media, but may be helpful in keeping adjacent containers cool.
Unusual fire or explosion hazards:	This product is an aqueous mixture which will not burn. If evaporated to dryness, the solid residue may pose a slight fire hazard.
Hazardous combustion products:	Oxides of nitrogen. Oxides of carbon.

#### 6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Do not let product enter drains.
Clean-up methods:	Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up. Absorb spill with inert material. Shovel material into appropriate container for disposal. Wear appropriate protective equipment and clothing during clean-up.

#### 7. HANDLING AND STORAGE

Handling:	Avoid contact with eyes. Avoid prolonged or repeated skin contact with this material. Keep out of the reach of children.
Storage:	Keep from freezing.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Limestone	10 mg/m <sup>3</sup> TWA Total dust.	5 mg/m <sup>3</sup> PEL Respirable fraction. 15 mg/m <sup>3</sup> PEL Total dust.	None	None
Titanium dioxide	10 mg/m <sup>3</sup> TWA	15 mg/m <sup>3</sup> PEL Total dust.	None	None
Quartz (SiO <sub>2</sub> )	0.025 mg/m <sup>3</sup> TWA Respirable fraction.	2.4 MPPCF TWA Respirable. 0.1 mg/m <sup>3</sup> TWA Respirable. 0.3 mg/m <sup>3</sup> TWA Total dust.	None	None

<b>Engineering controls:</b>	Use local exhaust ventilation.
<b>Respiratory protection:</b>	No personal respiratory protective equipment normally required.
<b>Eye/face protection:</b>	None required in normal use.
<b>Skin protection:</b>	Use impermeable gloves and protective clothing as necessary to prevent skin contact.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b>	pasty
<b>Color:</b>	Light beige
<b>Odor:</b>	Acrylic
<b>Odor threshold:</b>	Not available.
<b>pH:</b>	7.3 - 8.2
<b>Vapor pressure:</b>	15 mm hg (20 °C (68 °F))
<b>Boiling point/range:</b>	100 °C (212 °F)
<b>Melting point/ range:</b>	Not available.
<b>Specific gravity:</b>	1.69
<b>Vapor density:</b>	Heavier than air, (Air = 1)
<b>Flash point:</b>	not applicable
<b>Flammable/Explosive limits - lower:</b>	Not available.
<b>Flammable/Explosive limits - upper:</b>	Not available.
<b>Autoignition temperature:</b>	Not available.
<b>Evaporation rate:</b>	0.5 (Butyl acetate = 1)
<b>Solubility in water:</b>	Soluble
<b>Partition coefficient (n-octanol/water):</b>	Not available.
<b>VOC content:</b>	1.5 %; 33 g/l (by weight, calculated using CARB method; g/L less water, less exempts calculated using SCAQMD method)
<b>Viscosity:</b>	<= 1,000,000 cp
<b>Decomposition temperature:</b>	Not available.

## 10. STABILITY AND REACTIVITY

**Stability:** Stable under normal conditions of storage and use.

**Hazardous reactions:** Will not occur.

**Hazardous decomposition products:** Oxides of nitrogen. Oxides of carbon.

**Incompatible materials:** Not available.

**Reactivity:** Not available.

**Conditions to avoid:** Not available.

## 11. TOXICOLOGICAL INFORMATION

**Relevant routes of exposure:** Skin, Inhalation

### Potential Health Effects/Symptoms

**Inhalation:** Contains crystalline silica (quartz), which is classified as a possible carcinogen. However, the crystalline silica present in this product is encapsulated in the liquid and will only be liberated if the product is sanded or abraded, and even then what is liberated will not be pure crystalline silica. Appropriate precautions, however, should be taken if the product is sanded or abraded to prevent personnel from breathing the dust.

**Skin contact:** May cause mild skin irritation.

**Eye contact:** Contact with uncured product may irritate the eyes.

**Ingestion:** Ingestion of this product is unlikely. However, ingestion of product may produce gastrointestinal irritation and disturbances.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Limestone	None	Nuisance dust
Titanium dioxide	None	Irritant, Respiratory, Some evidence of carcinogenicity
Quartz (SiO <sub>2</sub> )	None	Immune system, Lung, Some evidence of carcinogenicity

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Limestone	No	No	No
Titanium dioxide	No	Group 2B	No
Quartz (SiO <sub>2</sub> )	Known To Be Human Carcinogen.	Group 1	No

## 12. ECOLOGICAL INFORMATION

**Ecological information:** Not available.

### 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

<b>Recommended method of disposal:</b>	Dispose of according to Federal, State and local governmental regulations.
<b>Hazardous waste number:</b>	It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

### 14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

#### U.S. Department of Transportation Ground (49 CFR)

<b>Proper shipping name:</b>	Not regulated
<b>Hazard class or division:</b>	None
<b>Identification number:</b>	None
<b>Packing group:</b>	None

#### International Air Transportation (ICAO/IATA)

<b>Proper shipping name:</b>	Not regulated
<b>Hazard class or division:</b>	None
<b>Identification number:</b>	None
<b>Packing group:</b>	None

#### Water Transportation (IMO/IMDG)

<b>Proper shipping name:</b>	Not regulated
<b>Hazard class or division:</b>	None
<b>Identification number:</b>	None
<b>Packing group:</b>	None

### 15. REGULATORY INFORMATION

#### United States Regulatory Information

<b>TSCA 8 (b) Inventory Status:</b>	All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
<b>TSCA 12 (b) Export Notification:</b>	None above reporting de minimis
<b>CERCLA/SARA Section 302 EHS:</b>	None above reporting de minimis
<b>CERCLA/SARA Section 311/312:</b>	Immediate Health, Delayed Health
<b>CERCLA/SARA Section 313:</b>	None above reporting de minimis
<b>California Proposition 65:</b>	This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

#### Canada Regulatory Information

<b>CEPA DSL/NDSL Status:</b>	All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
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### 16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

**Prepared by:** Mary Ellen Roddy, Sr. Regulatory Affairs Specialist

**Issue date:** 12/15/2014

**DISCLAIMER:** The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.



**SAFETY DATA SHEET**

*Print Date: 5/31/2015*

<b>PRODUCT NAME: LS250B</b> <b>COLOR: BLACK</b>	<b>REVISION DATE: May 31, 2015</b>
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**1. PRODUCT AND COMPANY IDENTIFICATION**

**Identification Of The Substance Or Preparation**

**Commercial Product Name: LS250B**

**Manufacturer:**

LaVanture Products

3806 Gallatin Way

Elkhart, IN 46514

PHONE: 574-264-0658 FAX: 574-264-6601

General Description: Hybrid Elastomeric Sealant / Adhesive

Physical Form: Paste

Color: Black

Odor: Slight odor

NFPA PROFILE: Health 1 Flammability 1 Instability/Reactivity 0

Note: NFPA = National Fire Protection Association

**2. HAZARDS IDENTIFICATION**

**Classification Of The Substance Or Mixture:** This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

**Classification (GHS):**

Class	Category	Route Of Exposure
Reproductive Toxicity	Category 2 (developmental toxicity)	
Harmful to Aquatic Life	Category 2	
Skin Irritation	Category 1	
Serious Eye Damage / Eye Irritation	Category 2	

GHS Label Elements

Signal Word:

Warning





## SAFETY DATA SHEET

<b>H-Code</b> H315 H317 H318 H361d	<b>Hazard Statements.</b> Causes skin irritation. May cause an allergic skin reaction. Causes serious eye injury. Suspected of damaging the unborn child.
<b>P-Code</b> P273 P280 P302 + P352 P305 + P351 P338 P501	<b>Precautionary Statements.</b> Avoid release to the environment. Wear protective gloves/protective clothing / eye protection. If on skin: Wash with plenty of soap and water. If in eyes: Rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Dispose of contents /container in accordance with local regulation.

### 3. COMPOSITION/ INGREDIENTS

#### Information On Ingredients:

CAS #	COMPONENT	PERCENT
1317-65-3	Calcium Carbonate	35 – 55%
1760-24-3	Amino Silane	0.5 – 5%
2768-02-7	Vinyltrimethoxysilane	0.5 – 5%
13463-67-7	Titanium Dioxide	4 – 10%
-----	Proprietary Polymers	15 – 30%

Hazardous Ingredient: Amino Silane & Vinyltrimethoxysilane.

### 4. FIRST AID MEASURES

**General Information:** Get medical attention immediately if irritation or symptoms occur. Before seeking medical remove contaminated clothing and shoes. Take a copy of the Safety Data Sheet when going for medical treatment.

**After Inhalation:** If inhaled remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Consult a physician.

**After Contact With The Skin:** If contact with skin, immediately flush skin with plenty of water for at least 15 min. Wash with soap and water.

**After Contact With Eyes:** If contact with eyes, immediately hold eyelids apart and flush with plenty of water for at least 15 min. Consult a physician.

**After Swallowing:** For ingestion, if conscious, give no more than two glasses of water but do not induce vomiting. If vomiting does occur, give additional fluids. Get medical attention immediately.

### 5. FIRE FIGHTING MEASURES



## SAFETY DATA SHEET

### Flammable Properties:

Flash Point.....: Not applicable (solid)  
Upper Flammable Limit.....: Not applicable  
Lower Flammable Limit (LEL).....: Not applicable  
Autoignition Temperature.....: Not applicable  
Sensitivity to Impact.....: Not applicable  
Sensitivity to Discharge.....: Not applicable

Method  
(ISO 2692)

### Fire and Explosion Hazards:

**Recommended Extinguishing Media:** Water mist, carbon dioxide, dry chemical or alcohol resistant foam.

**Unsuitable Extinguishing Media:** Sharp water jet.

**Special Exposure Hazards Arising From The Substance Or Preparation Itself, Combustion Products, Resulting Gases:** Hazardous decomposition products: carbon dioxide, carbon monoxide and incompletely burnt hydrocarbons.

**Fire Fighting Procedures:** Cool endangered containers with water. Fire fighters should wear full protective clothing including a self-contained breathing apparatus.

## 6. ACCIDENTAL RELEASE MEASURES

**Precautions:** Wear personal protection equipment (see section 8). Keep unprotected persons away. Avoid contact with eyes and skin. Avoid inhaling mists and vapors.

**Containment:** Prevent material from entering surface waters, drains or sewers and soil. Contain any fluid that runs out using suitable material (e.g. earth). Retain contaminated water/extinguishing water. Dispose of in prescribed marked containers. Spills of material which could reach surface waters must be reported to the United States Coast Guard National Response Center's toll free number (800) 4248802.

**Methods For Cleaning Up:** Do not flush away with water. For small amounts: Absorb with a liquid binding material such as diatomaceous earth and dispose of according to local/state/federal regulations. Contain larger amounts and pump up into suitable containers. Clean any slippery coating that remains using a detergent/soap solution or another biodegradable cleaner. Exhaust vapors.

## 7. HANDLING AND STORAGE

### Handling

**Precautions For Safe Handling:** Ensure adequate ventilation. Avoid contact with skin and eyes. Do not eat drink or smoke when using this product. Always wear protective clothing and eye protective equipment. Wash thoroughly after use.

**Precautions Against Fire And Explosion:** Product is not considered flammable under normal



## SAFETY DATA SHEET

conditions, and product is not considered explosive.

### Storage

**Conditions For Storage Rooms And Vessels:** Make sure there is no possibility of entering the ground.

**Advice For Storage Of Incompatible Materials:** Store in cool area.

**Further Information For Storage:** Protect against moisture. Store in original container only. Keep container tightly closed and store in a cool, well ventilated place.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Engineering Controls

**Ventilation:** Use with adequate ventilation. Recommended.

**Local Exhaust:** In case of potential decomposition products: Local exhaust ventilation which meets the requirements of ANSI Z9.2 is recommended to control airborne containments at the point of use. (To maintain concentration below TLV).

### Component Exposure Limits

MATERIAL	CAS #	TYPE	mg/m <sup>3</sup>	DUST
Calcium Carbonate	1317-65-3	OSHA TWA	15	Total
			5	Respirable
Calcium Carbonate	1317-65-3	NIOSH	10	Total
			5	Respirable
Titanium Dioxide	13463-67-7	ACGIH TWA	10	-----
Titanium Dioxide	13463-67-7	OSHA	15	Total

### Personal Protection Equipment (PPE)

**Respiratory Protection:** Respiratory protection is not normally required. A NIOSH approved air purifying respirator equipped with universal multi-containment, multi-gas/vapor cartridges and at least P-99 solid/aerosol particulate filters is recommended if overexposure to dusts, mists, or vapors could occur.

**Hand Protection:** Any liquid-tight rubber or vinyl rubber protective gloves.

**Eye Protection:** Safety glasses with side shields. Additional eye and face protection, splash-proof goggles, hood, full-faced respirator, or face shield is recommended if splashing occur.

**Other Protective Clothing Or Equipment:** Additional protective clothing or equipment is not normally required. Provide eye bath and safety shower.

**General Hygiene And Protection Measures:** Avoid contact with eyes, skin and clothing. Avoid breathing dust/vapor/mist/gas/aerosol. Do not eat, drink or smoke when handling. Follow standard industrial hygiene practices when using this material. Wash thoroughly after handling.

## 9. PHYSICAL/CHEMICAL CHARACTERISTICS



## SAFETY DATA SHEET

### Appearance

Physical State/Form.....: Paste  
 Color.....: Black  
 Odor.....: Slight odor  
 Specific Gravity.....: 1.66

### Safety Parameters

Melting Point/Melting Range...: Not applicable  
 Boiling Point/Boiling Range.....: Not applicable  
 Flash Point.....: >200°C (>392°F)  
 Ignition Temperature.....: Not determined  
 Lower Explosion Limit (LEL).....: Not determined  
 Vapor Pressure.....: < 1  
 Vapor Density (Air=1).....: > 1  
 Density.....: 12.29 lbs. / gallon  
 Water Solubility/Miscibility.....: Not applicable  
 pH-Value.....: Not applicable  
 VOC Content.....: 18 grams per liter

METHOD

(ISO 2592)

## 10. STABILITY AND REACTIVITY

**General Information:** If stored and handled in accordance with standard industrial practices no hazardous reactions are known.

**Reactivity:** No reactivity hazard is expected.

**Chemical Stability:** Stable at normal temperatures and pressure.

**Conditions To Avoid:** Avoid heat, flames and sparks. Avoid contact with incompatible materials.

**Incompatible Materials:** Strong acids, strong oxidizing materials.

**Hazardous Decomposition Products:** Upon decomposition, this product emits carbon monoxide, carbon dioxide and or low molecular weight hydrocarbons.

**Hazardous Decomposition (Combustion):** Upon decomposition, this product emits carbon monoxide, carbon dioxide and or low molecular weight hydrocarbons.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

**Product Details: Amino Silane (CAS # 1760-24-3)**

Route of exposure	Result/Effect	Species/Test System	Source
Oral	LD <sub>50</sub> :>2000 mg/kg	Rat	Conclusion by analogy
Dermal	LD <sub>50</sub> :>2000 mg/kg	Rat	Conclusion by analogy

### Acute Toxicity



## SAFETY DATA SHEET

**Product Details: Vinyltrimethoxysilane (CAS # 2768-02-7)**

Route of Exposure	Result/Effect	Species/Test System	Source
Oral	LD <sub>50</sub> :>2000 mg/kg	Rat	Conclusion by analogy
Dermal	LD <sub>50</sub> :>2000 mg/kg	Rat	Conclusion by analogy



## SAFETY DATA SHEET

### Acute Toxicity

Product Details: Titanium Dioxide (CAS# 13463-67-7) Light & Neutral Colors Only.

Route of exposure	Result/Effect	Species/Test System	Source
Oral	LD <sub>50</sub> : >10000 mg/kg	Rat	Conclusion by analogy

### Information On Likely Routes Of Exposure

#### Inhalation:

Assessment: No information available for this product. Maybe harmful if inhaled.

#### Ingestion:

Assessment: No information available for this product. May be harmful if ingested.

#### Skin Contact:

Assessment: May cause irritation of the skin.

#### Eye Contact:

Assessment: May cause irritation to eyes. Contact may cause tearing, redness and stinging or burning feeling, swelling and blurred vision.

#### Immediate Effects:

Assessment: Skin and eye irritation.

#### Delayed Effects:

Assessment: No information is available.

#### Medical Conditions Aggravated by Exposure:

Assessment: Skin and eye disorders

#### Respiratory Sensitization:

Assessment: For this endpoint no toxicological test data is available for the whole product.

#### Germ Cell Mutagenicity

Assessment: For this endpoint no toxicological test data is available for the whole product.

#### Carcinogenicity

Assessment: For this endpoint no toxicological test data is available for the whole product.



## SAFETY DATA SHEET

### Reproductive Toxicity

**Assessment:** May damage fertility or the unborn child.

### Specific Target Organ Toxicity (Single Exposure)

**Assessment:** For this endpoint no toxicological test data is available for the whole product.

### Specific Target Organ Toxicity (Repeated Exposure)

**Assessment:** For this endpoint no toxicological test data is available for the whole product.

### Aspiration Hazard

**Assessment:** Based on the physical – chemical properties of the product no aspiration hazard must be expected.

## 12. ECOLOGICAL INFORMATION

### Toxicity

#### Assessment:

Assessment based on ecotoxicological tests with similar products under consideration of the physical-chemical properties: For this product is acutely harmful for aquatic organisms. Do not discharge into environment without control. Product has not been tested. Statements on ecotoxicology derived from properties of individual components.

### Persistence And Degradability

**Assessment:** No data known.

### Bioaccumulative Potential

**Assessment:** No data known.

### Mobility In Soil:

**Assessment:** No data known.

### Other Adverse Effects:

**Assessment:** No data known.

## 13. DISPOSAL CONSIDERATIONS

### Product Disposal

**Recommendation:** Material that cannot be used, reprocessed or recycled should be disposed of in accordance with federal, state and local regulations at an approved facility. Depending on the regulations, waste treatment methods may include, e.g., landfill or incineration.



## SAFETY DATA SHEET

### Packaging Disposal

**Recommendation:** Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local/state/federal regulations. Uncleaned packaging should be treated with the same precautions as the material.

## 14. TRANSPORT INFORMATION

### US DOT & CANADA TDG SURFACE

Valuation.....: Not regulated for transport.

### Transport by Sea IMDG-Code

Valuation.....: Not regulated for transport.

### Air Transport ICAO-TI/IATA-DGR

Valuation.....: Not regulated for transport.

## 15. REGULATORY INFORMATION

### U.S. Federal Regulations

None of this products components are listed under the following:

- TSCA Inventory Status and TSCA Information:
- TSCA 12(b) Export Notification:
- CERCLA Regulated Chemicals: (40 CFR302.4)
- SARA 302 EHS Chemicals: (40 CFR 355 Appendix A)
- SARA 311/312 Hazard Class: (40 CFR 370.21)
- SARA 313 Chemicals: (40 CFR 372.65)

### U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

COMPONEN T	CAS #	CA	MA	MN	NJ	PA
Calcium Carbonate	1317-65-3	No	Yes	Yes	Yes	Yes
Titanium Dioxide	13463-67-7	No	Yes	Yes	Yes	Yes

- **California Prop 65:** This product contains chemicals known to the State of California to cause cancer and, birth defects or other reproductive harm.



**SAFETY DATA SHEET**

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**SAFETY DATA SHEET**

**Details Of International Registration Status**

South Korea (Republic of Korea)	<b>ECL (Existing Chemicals list):</b> This product is listed in, or complies with, the substance inventory.
Australia	<b>AICS (Australian Inventory of Chemical Substances):</b> This product is listed in, or complies with, the substance inventory.
Canada	<b>DSL (Domestic Substance List):</b> This product is listed in, or complies with, the substance inventory.
Philippines	<b>PICCS (Philippine Inventory of Chemicals and Chemical Substances):</b> This product is listed in, or complies with, the substances inventory.
United States of America (USA)	<b>TSCA (Toxic Substances Control Act Chemical Substances Inventory):</b> This product is listed in, or complies with, the substances inventory.
European Economic Area (EEA)	<b>REACH (Regulation (EC) No 1907/2006):</b> General note: the registration obligations for substances imported into the EEA or manufactured within the EEA by the supplier mentioned in section 1 are fulfilled by the said supplier. The registration obligations for substances imported in the EEA by customers or the downstream users must be fulfilled by the latter.

**16. OTHER INFORMATION**

Prepared by: LaVanture Products

These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

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# SAFETY DATA SHEET

Print Date: 5/31/2015

PRODUCT NAME: LS250W COLOR: WHITE	REVISION DATE: May 31, 2015
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## 1. PRODUCT AND COMPANY IDENTIFICATION

### Identification Of The Substance Or Preparation

Commercial Product Name: LS250W

### Manufacturer:

LaVanture Products

3806 Gallatin Way

Elkhart, IN 46514

PHONE: 574-264-0658 FAX: 574-264-6601

General Description: Hybrid Elastomeric Sealant / Adhesive

Physical Form: Paste

Color: White

Odor: Slight odor

NFPA PROFILE: Health 1 Flammability 1 Instability/Reactivity 0

Note: NFPA = National Fire Protection Association

## 2. HAZARDS IDENTIFICATION

Classification Of The Substance Or Mixture: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

### Classification (GHS):

Class	Category	Route Of Exposure
Reproductive Toxicity	Category 2 (developmental toxicity)	
Harmful to Aquatic Life	Category 2	
Skin Irritation	Category 1	
Serious Eye Damage / Eye Irritation	Category 2	

GHS Label Elements

Signal Word:

Warning



H-Code

Hazard Statements.



## SAFETY DATA SHEET

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye injury.
H361d	Suspected of damaging the unborn child.
P-Code	Precautionary Statements.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing / eye protection.
P302 + P352	If on skin: Wash with plenty of soap and water.
P305 + P351	If in eyes: Rinse with water for several minutes.
P338	Remove contact lenses, if present and easy to do. Continue rinsing.
P501	Dispose of contents /container in accordance with local regulation.

### 3. COMPOSITION/ INGREDIENTS

#### Information On Ingredients:

CAS #	COMPONENT	PERCENT
1317-65-3	Calcium Carbonate	35 – 55%
1760-24-3	Amino Silane	0.5 – 5%
2768-02-7	Vinyltrimethoxysilane	0.5 – 5%
13463-67-7	Titanium Dioxide	4 – 10%
-----	Proprietary Polymers	15 – 30%

Hazardous Ingredient: Amino Silane & Vinyltrimethoxysilane.

### 4. FIRST AID MEASURES

**General Information:** Get medical attention immediately if irritation or symptoms occur. Before seeking medical remove contaminated clothing and shoes. Take a copy of the Safety Data Sheet when going for medical treatment.

**After Inhalation:** If inhaled remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Consult a physician.

**After Contact With The Skin:** If contact with skin, immediately flush skin with plenty of water for at least 15 min. Wash with soap and water.

**After Contact With Eyes:** If contact with eyes, immediately hold eyelids apart and flush with plenty of water for at least 15 min. Consult a physician.

**After Swallowing:** For ingestion, if conscious, give no more than two glasses of water but do not induce vomiting. If vomiting does occur, give additional fluids. Get medical attention immediately.

### 5. FIRE FIGHTING MEASURES

<b>Flammable Properties:</b>	<b>Method</b>
Flash Point.....: Not applicable (solid)	(ISO 2692)



## SAFETY DATA SHEET

Upper Flammable Limit.....: Not applicable  
Lower Flammable Limit (LEL).....: Not applicable  
Autoignition Temperature.....: Not applicable  
Sensitivity to Impact.....: Not applicable  
Sensitivity to Discharge.....: Not applicable

### Fire and Explosion Hazards:

**Recommended Extinguishing Media:** Water mist, carbon dioxide, dry chemical or alcohol resistant foam.

**Unsuitable Extinguishing Media:** Sharp water jet.

**Special Exposure Hazards Arising From The Substance Or Preparation Itself, Combustion Products, Resulting Gases:** Hazardous decomposition products: carbon dioxide, carbon monoxide and incompletely burnt hydrocarbons.

**Fire Fighting Procedures:** Cool endangered containers with water. Fire fighters should wear full protective clothing including a self-contained breathing apparatus.

## 6. ACCIDENTAL RELEASE MEASURES

**Precautions:** Wear personal protection equipment (see section 8). Keep unprotected persons away. Avoid contact with eyes and skin. Avoid inhaling mists and vapors.

**Containment:** Prevent material from entering surface waters, drains or sewers and soil. Contain any fluid that runs out using suitable material (e.g. earth). Retain contaminated water/extinguishing water. Dispose of in prescribed marked containers. Spills of material which could reach surface waters must be reported to the United States Coast Guard National Response Center's toll free number (800) 4248802.

**Methods For Cleaning Up:** Do not flush away with water. For small amounts: Absorb with a liquid binding material such as diatomaceous earth and dispose of according to local/state/federal regulations. Contain larger amounts and pump up into suitable containers. Clean any slippery coating that remains using a detergent/soap solution or another biodegradable cleaner. Exhaust vapors.

## 7. HANDLING AND STORAGE

### Handling

**Precautions For Safe Handling:** Ensure adequate ventilation. Avoid contact with skin and eyes. Do not eat drink or smoke when using this product. Always wear protective clothing and eye protective equipment. Wash thoroughly after use.

**Precautions Against Fire And Explosion:** Product is not considered flammable under normal conditions, and product is not considered explosive.

### Storage

**Conditions For Storage Rooms And Vessels:** Make sure there is no possibility of entering the



## SAFETY DATA SHEET

ground.

**Advice For Storage Of Incompatible Materials:** Store in cool area.

**Further Information For Storage:** Protect against moisture. Store in original container only. Keep container tightly closed and store in a cool, well ventilated place.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls**

**Ventilation:** Use with adequate ventilation. Recommended.

**Local Exhaust:** In case of potential decomposition products: Local exhaust ventilation which meets the requirements of ANSI Z9.2 is recommended to control airborne containments at the point of use. (To maintain concentration below TLV).

**Component Exposure Limits**

MATERIAL	CAS #	TYPE	mg/m <sup>3</sup>	DUST
Calcium Carbonate	1317-65-3	OSHA TWA	15	Total
			5	Respirable
Calcium Carbonate	1317-65-3	NIOSH	10	Total
			5	Respirable
Titanium Dioxide	13463-67-7	ACGIH TWA	10	-----
Titanium Dioxide	13463-67-7	OSHA	15	Total

**Personal Protection Equipment (PPE)**

**Respiratory Protection:** Respiratory protection is not normally required. A NIOSH approved air purifying respirator equipped with universal multi-containment, multi-gas/vapor cartridges and at least P-99 solid/aerosol particulate filters is recommended if overexposure to dusts, mists, or vapors could occur.

**Hand Protection:** Any liquid-tight rubber or vinyl rubber protective gloves.

**Eye Protection:** Safety glasses with side shields. Additional eye and face protection, splash-proof goggles, hood, full-faced respirator, or face shield is recommended if splashing occur.

**Other Protective Clothing Or Equipment:** Additional protective clothing or equipment is not normally required. Provide eye bath and safety shower.

**General Hygiene And Protection Measures:** Avoid contact with eyes, skin and clothing. Avoid breathing dust/vapor/mist/gas/aerosol. Do not eat, drink or smoke when handling. Follow standard industrial hygiene practices when using this material. Wash thoroughly after handling.

### 9. PHYSICAL/CHEMICAL CHARACTERISTICS

**Appearance**

Physical State/Form.....: Paste

Color.....: White

Odor.....: Slight odor



## SAFETY DATA SHEET

Specific Gravity.....: 1.66	
<b>Safety Parameters</b>	<b>METHOD</b>
Melting Point/Melting Range...: Not applicable	
Boiling Point/Boiling Range.....: Not applicable	
Flash Point.....: >200°C (>392°F)	(ISO 2592)
Ignition Temperature.....: Not determined	
Lower Explosion Limit (LEL).....: Not determined	
Vapor Pressure.....: < 1	
Vapor Density (Air=1).....: > 1	
Density.....: 12.29 lbs. / gallon	
Water Solubility/Miscibility.....: Not applicable	
pH-Value.....: Not applicable	
VOC Content.....: 18 grams per liter	

### 10. STABILITY AND REACTIVITY

**General Information:** If stored and handled in accordance with standard industrial practices no hazardous reactions are known.

**Reactivity:** No reactivity hazard is expected.

**Chemical Stability:** Stable at normal temperatures and pressure.

**Conditions To Avoid:** Avoid heat, flames and sparks. Avoid contact with incompatible materials.

**Incompatible Materials:** Strong acids, strong oxidizing materials.

**Hazardous Decomposition Products:** Upon decomposition, this product emits carbon monoxide, carbon dioxide and or low molecular weight hydrocarbons.

**Hazardous Decomposition (Combustion):** Upon decomposition, this product emits carbon monoxide, carbon dioxide and or low molecular weight hydrocarbons.

### 11. TOXICOLOGICAL INFORMATION

**Acute Toxicity**

**Product Details: Amino Silane (CAS # 1760-24-3)**

Route of exposure	Result/Effect	Species/Test System	Source
Oral	LD <sub>50</sub> :>2000 mg/kg	Rat	Conclusion by analogy
Dermal	LD <sub>50</sub> :>2000 mg/kg	Rat	Conclusion by analogy

**Acute Toxicity**

**Product Details: Vinyltrimethoxysilane (CAS # 2768-02-7)**

Route of Exposure	Result/Effect	Species/Test System	Source
Oral	LD <sub>50</sub> :>2000 mg/kg	Rat	Conclusion by analogy
Dermal	LD <sub>50</sub> :>2000 mg/kg	Rat	Conclusion by analogy



## SAFETY DATA SHEET

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## SAFETY DATA SHEET

### Acute Toxicity

**Product Details: Titanium Dioxide (CAS# 13463-67-7) Light & Neutral Colors Only.**

Route of exposure	Result/Effect	Species/Test System	Source
Oral	LD <sub>50</sub> :>10000 mg/kg	Rat	Conclusion by analogy

### Information On Likely Routes Of Exposure

#### Inhalation:

**Assessment:** No information available for this product. Maybe harmful if inhaled.

#### Ingestion:

**Assessment:** No information available for this product. May be harmful if ingested.

#### Skin Contact:

**Assessment:** May cause irritation of the skin.

#### Eye Contact:

**Assessment:** May cause irritation to eyes. Contact may cause tearing, redness and stinging or burning feeling, swelling and blurred vision.

#### Immediate Effects:

**Assessment:** Skin and eye irritation.

#### Delayed Effects:

**Assessment:** No information is available.

#### Medical Conditions Aggravated by Exposure:

**Assessment:** Skin and eye disorders

#### Respiratory Sensitization:

**Assessment:** For this endpoint no toxicological test data is available for the whole product.

#### Germ Cell Mutagenicity

**Assessment:** For this endpoint no toxicological test data is available for the whole product.

#### Carcinogenicity

**Assessment:** For this endpoint no toxicological test data is available for the whole product.



## SAFETY DATA SHEET

### Reproductive Toxicity

**Assessment:** May damage fertility or the unborn child.

### Specific Target Organ Toxicity (Single Exposure)

**Assessment:** For this endpoint no toxicological test data is available for the whole product.

### Specific Target Organ Toxicity (Repeated Exposure)

**Assessment:** For this endpoint no toxicological test data is available for the whole product.

### Aspiration Hazard

**Assessment:** Based on the physical – chemical properties of the product no aspiration hazard must be expected.

## 12. ECOLOGICAL INFORMATION

### Toxicity

#### Assessment:

Assessment based on ecotoxicological tests with similar products under consideration of the physical-chemical properties: For this product is acutely harmful for aquatic organisms. Do not discharge into environment without control. Product has not been tested. Statements on ecotoxicology derived from properties of individual components.

### Persistence And Degradability

**Assessment:** No data known.

### Bioaccumulative Potential

**Assessment:** No data known.

### Mobility In Soil:

**Assessment:** No data known.

### Other Adverse Effects:

**Assessment:** No data known.

## 13. DISPOSAL CONSIDERATIONS

### Product Disposal

**Recommendation:** Material that cannot be used, reprocessed or recycled should be disposed of in accordance with federal, state and local regulations at an approved facility. Depending on the regulations, waste treatment methods may include, e.g., landfill or incineration.

### Packaging Disposal



**SAFETY DATA SHEET**

**Recommendation:** Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local/state/federal regulations. Uncleaned packaging should be treated with the same precautions as the material.

**14. TRANSPORT INFORMATION**

**US DOT & CANADA TDG SURFACE**

Valuation.....: Not regulated for transport.

**Transport by Sea IMDG-Code**

Valuation.....: Not regulated for transport.

**Air Transport ICAO-TI/IATA-DGR**

Valuation.....: Not regulated for transport.

**15. REGULATORY INFORMATION**

**U.S. Federal Regulations**

None of this products components are listed under the following:

- TSCA Inventory Status and TSCA Information:
- TSCA 12(b) Export Notification:
- CERCLA Regulated Chemicals: (40 CFR302.4)
- SARA 302 EHS Chemicals: (40 CFR 355 Appendix A)
- SARA 311/312 Hazard Class: (40 CFR 370.21)
- SARA 313 Chemicals: (40 CFR 372.65)

**U.S. State Regulations**

The following components appear on one or more of the following state hazardous substances lists:

COMPONEN T	CAS #	CA	MA	MN	NJ	PA
Calcium Carbonate	1317-65-3	No	Yes	Yes	Yes	Yes
Titanium Dioxide	13463-67-7	No	Yes	Yes	Yes	Yes

- **California Prop 65:** This product contains chemicals known to the State of California to cause cancer and, birth defects or other reproductive harm.



## SAFETY DATA SHEET

### Details Of International Registration Status

South Korea (Republic of Korea)	<b>ECL</b> (Existing Chemicals list): This product is listed in, or complies with, the substance inventory.
Australia	<b>AICS</b> (Australian Inventory of Chemical Substances): This product is listed in, or complies with, the substance inventory.
Canada	<b>DSL</b> (Domestic Substance List): This product is listed in, or complies with, the substance inventory.
Philippines	<b>PICCS</b> (Philippine Inventory of Chemicals and Chemical Substances): This product is listed in, or complies with, the substances inventory.
United States of America (USA)	<b>TSCA</b> (Toxic Substances Control Act Chemical Substances Inventory): This product is listed in, or complies with, the substances inventory.
European Economic Area (EEA)	<b>REACH</b> (Regulation (EC) No 1907/2006): General note: the registration obligations for substances imported into the EEA or manufactured within the EEA by the supplier mentioned in section 1 are fulfilled by the said supplier. The registration obligations for substances imported in the EEA by customers or the downstream users must be fulfilled by the latter.

### 16. OTHER INFORMATION

Prepared by: LaVanture Products

These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

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## MATERIAL SAFETY DATA SHEET

01-207-WB  
28 00

DATE OF PREPARATION  
Sep 28, 2014

### SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NUMBER**

01-207-WB

**PRODUCT NAME**

Professional Pro Choice Exterior 100% Acrylic Velvet, White Base

**MANUFACTURER'S NAME**

Columbia Paint & Coatings  
Cleveland, OH 44115

**Telephone Numbers and Websites**

<b>Product Information</b>	(888) 677-8673 www.columbiapaint.com
<b>Regulatory Information</b>	(216) 566-2902
<b>Medical Emergency</b>	(216) 566-2917
<b>Transportation Emergency*</b>	(800) 424-9300
<i>*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)</i>	

### SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
0.8	14464-46-1	<b>Cristobalite</b>		
		ACGIH TLV	0.025 mg/m3 as Resp. Dust	
		OSHA PEL	0.05 mg/m3 as Resp. Dust	
11	13463-67-7	<b>Titanium Dioxide</b>		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	
2	1314-13-2	<b>Zinc Oxide</b>		
		ACGIH TLV	Not Available	
		OSHA PEL	Not Available	

### SECTION 3 — HAZARDS IDENTIFICATION

**ROUTES OF EXPOSURE**

INHALATION of vapor or spray mist.  
EYE or SKIN contact with the product, vapor or spray mist.

**EFFECTS OF OVEREXPOSURE**

**EYES:** Irritation.  
**SKIN:** Prolonged or repeated exposure may cause irritation.  
**INHALATION:** Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.

**SIGNS AND SYMPTOMS OF OVEREXPOSURE**

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE**

None generally recognized.

**CANCER INFORMATION**

For complete discussion of toxicology data refer to Section 11.

**HMIS Codes**

<b>Health</b>	1*
<b>Flammability</b>	0
<b>Reactivity</b>	0

### SECTION 4 — FIRST AID MEASURES

**EYES:** Flush eyes with large amounts of water for 15 minutes. Get medical attention.  
**SKIN:** Wash affected area thoroughly with soap and water.  
Remove contaminated clothing and launder before re-use.  
**INHALATION:** If affected, remove from exposure. Restore breathing. Keep warm and quiet.  
**INGESTION:** Do not induce vomiting. Get medical attention immediately.

## SECTION 5 — FIRE FIGHTING MEASURES

<b>FLASH POINT</b>	<b>LEL</b>	<b>UEL</b>	<b>FLAMMABILITY CLASSIFICATION</b>
Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Applicable	Applicable	<b>EXTINGUISHING MEDIA</b>
Carbon Dioxide, Dry Chemical, Alcohol Foam			

### UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

### SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

## SECTION 6 — ACCIDENTAL RELEASE MEASURES

### STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

## SECTION 7 — HANDLING AND STORAGE

### STORAGE CATEGORY

Not Applicable

### PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally.

Keep out of the reach of children.

## SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

### PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m<sup>3</sup> (total dust), 3 mg/m<sup>3</sup> (respirable fraction), OSHA PEL 15 mg/m<sup>3</sup> (total dust), 5 mg/m<sup>3</sup> (respirable fraction).

Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

### VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

### RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

### PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

### EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

<b>PRODUCT WEIGHT</b>	9.90 lb/gal	1186 g/l
<b>SPECIFIC GRAVITY</b>	1.19	
<b>BOILING POINT</b>	212 - 213 °F	100 - 100 °C
<b>MELTING POINT</b>	Not Available	
<b>VOLATILE VOLUME</b>	63%	
<b>EVAPORATION RATE</b>	Slower than ether	
<b>VAPOR DENSITY</b>	Heavier than air	
<b>SOLUBILITY IN WATER</b>	Not Available	
<b>pH</b>	9.0	
<b>VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)</b>		
0.29 lb/gal	35 g/l	Less Water and Federally Exempt Solvents
0.11 lb/gal	13 g/l	Emitted VOC

**SECTION 10 — STABILITY AND REACTIVITY**

**STABILITY** — Stable

**CONDITIONS TO AVOID**

None known.

**INCOMPATIBILITY**

None known.

**HAZARDOUS DECOMPOSITION PRODUCTS**

By fire: Carbon Dioxide, Carbon Monoxide

**HAZARDOUS POLYMERIZATION**

Will not occur

**SECTION 11 — TOXICOLOGICAL INFORMATION****CHRONIC HEALTH HAZARDS**

Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

**TOXICOLOGY DATA**

CAS No.	Ingredient Name			
14464-46-1	Cristobalite	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
13463-67-7	Titanium Dioxide	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
1314-13-2	Zinc Oxide	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available

**SECTION 12 — ECOLOGICAL INFORMATION****ECOTOXICOLOGICAL INFORMATION**

No data available.

**SECTION 13 — DISPOSAL CONSIDERATIONS****WASTE DISPOSAL METHOD**

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

**SECTION 14 — TRANSPORT INFORMATION**

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

**US Ground (DOT)**

Not Regulated for Transportation.

**Canada (TDG)**

Not Regulated for Transportation.

**IMO**

Not Regulated for Transportation.

**IATA/CAO**

Not Regulated for Transportation.

**SECTION 15 — REGULATORY INFORMATION****SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION**

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
	Zinc Compound	2	1.5

**TSCA CERTIFICATION**

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

**SECTION 16 — OTHER INFORMATION**

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

New Touch up Paint

ALL 5-A/E COLORS

ACR-LF ACRYLYD\* Acrylic Enamel, Non-Lead Colors

4 PAGES  
11/3/05

MATERIAL SAFETY DATA SHEET

MANUFACTURER'S NAME  
THE SHERWIN-WILLIAMS COMPANY  
101 Prospect Avenue N.W.  
Cleveland, Ohio 44115  
DATE OF PREPARATION  
11/3/2005

EMERGENCY TELEPHONE NO.  
(216) 566-2917

INFORMATION TELEPHONE NO.  
(216) 566-2902

Section I -- PRODUCT IDENTIFICATION

PRODUCT NUMBER \* - Trade Mark  
ACR-LF (35-, J5-, JX-, F8, F10, F11 series)  
PRODUCT NAME  
ACRYLYD\* Acrylic Enamel, Non-Lead Colors  
PRODUCT CLASS  
Acrylic Enamel

Section II -- HAZARDOUS INGREDIENTS

CAS No.	INGREDIENT	% by Wt.	ACGIH TLV	OSHA PEL	UNITS	V.P.
64742-47-8	Mineral Spirits	<5	100	100	PPM	2.0
108-88-3	Toluene.	1-10	100	100	PPM	22.0
			STEL 150	150	PPM	
100-41-4	Ethylbenzene	<5	100	100	PPM	7.1
			STEL 125	125	PPM	
1330-20-7	Xylene.	25-45	100	100	PPM	5.9
			STEL 150	150	PPM	
64742-95-6	Light Aromatic Naphtha	<5	100		PPM	3.8
123-86-4	n-Butyl Acetate	5-15	150	150	PPM	10.0
			STEL 200	200		
112-07-2	2-Butoxyethyl Acetate	4	50		PPM	1.0
13463-67-7	Titanium Dioxide.	15	10	10(5)	Mg/M3 as Dust *	
*** Total Dust (Respirable Fractio						

Section III -- PHYSICAL DATA

PRODUCT WEIGHT -- 7.5-9.5 lb./gal.	EVAPORATION RATE -- Slower than Eth
SPECIFIC GRAVITY -- 0.9-1.1	VAPOR DENSITY -- Heavier than Ai
BOILING RANGE -- 222-384 F	MELTING POINT -- N.A.
VOLATILE VOLUME -- 54-91 %	SOLUBILITY IN WATER -- N.A.
VOC (Theoretical) -- 4.0-5.0 lb.	
FLASH POINT -- 50 F PMC	DOL Storage Category -- 1B
LEL -- 0.5	UEL -- 7.0

FLAMMABILITY CLASSIFICATION

RED LABEL -- Flammable, Flash below 100 F

Section IV -- FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY DATA -- See SECTION III

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Keep containers tightly closed. Isolate from heat, electrical equipment, sparks, and open flame. Closed containers may explode when exposed to extreme

heat. Application to hot surfaces requires special precautions. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.  
SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

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#### Section V -- HEALTH HAZARD DATA

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##### ROUTES OF EXPOSURE

Exposure may be by INHALATION and/or SKIN or EYE contact, depending on conditions of use. Alcohols and Acetates can be absorbed through the skin. To minimize exposure, follow recommendations for proper use, ventilation, and personal protective equipment.

##### ACUTE Health Hazards

##### EFFECTS OF OVEREXPOSURE

Irritation of eyes, skin and respiratory system. May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

Certain colors contain Lead (See PRODUCT LABEL). Acute occupational exposure to Lead is uncommon, but results in symptoms similar to chronic overexposure described below.

##### SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

##### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None known.

##### EMERGENCY AND FIRST AID PROCEDURES

If INHALED: If any breathing problems occur during use, LEAVE THE AREA and get fresh air. If problems remain or occur later, IMMEDIATELY get medical attention.

If on SKIN: Wash affected area thoroughly with soap and water. Remove contaminated clothing and launder before re-use.

If in EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

If SWALLOWED: Get medical attention.

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##### CHRONIC Health Hazards

Certain colors contain Lead and/or Chromate (See PRODUCT LABEL).

Chronic overexposure to Lead may result in damage to the blood-forming, nervous, urinary, and reproductive systems (including embryotoxic effects). Symptoms include abdominal discomfort or pain, constipation, loss of appetite, metallic taste, nausea, insomnia, nervous irritability, weakness, muscle and joint pains, headache and dizziness.

Chromates are listed by IARC and NTP. Although studies have associated exposure to Chromium VI compounds with an increased risk of respiratory cancer available evidence indicates that Lead Chromate (Chrome Yellow, Molybdate Orange) DOES NOT present this hazard.

Prolonged overexposure to solvent ingredients in Section II may cause adverse effects to the liver, urinary, blood forming, cardio-vascular, and reproductive systems.

Rats exposed to titanium dioxide dust at 250 mg./m<sup>3</sup> developed lung cancer, however, such exposure levels are not attainable in the workplace.

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

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#### Section VI -- REACTIVITY DATA

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STABILITY -- Stable

INCOMPATIBILITY

Metallics contain Aluminum. Contamination with Water, Acids, or Alkalis cause evolution of hydrogen, which may result in dangerously increased pressures in closed containers.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide, Oxides of Metals in Section II

HAZARDOUS POLYMERIZATION -- Will Not Occur  
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Section VII -- SPILL OR LEAK PROCEDURES

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STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate and remove with inert absorbent.  
WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers. Waste from products containing Lead or Chromium colors must be tested for extractability.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State, and Local regulations regarding pollution.  
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Section VIII -- PROTECTION INFORMATION

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PRECAUTIONS TO BE TAKEN IN USE

Certain colors contain Lead (See PRODUCT LABEL). Before initial use of Lead-containing colors, consult OSHA's Standard for Occupational Exposure to Lead (29 CFR 1910.1025).

Use only with adequate ventilation. Avoid breathing vapor and spray mist. Avoid contact with skin and eyes. Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section II) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section II, the applicable limits for nuisance dusts are ACGIH TLV 10 mg./m (total dust), OSHA PEL 15 mg./m<sup>3</sup> (total dust), 5 mg./m<sup>3</sup> (respirable fraction).  
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VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section II is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section II.

When sanding, wirebrushing, abrading, burning, or welding the dried film, wear a particulate respirator approved by NIOSH/MSHA for protection against non-volatile materials in Section II.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section II.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.  
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Section IX -- PRECAUTIONS

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DOL STORAGE CATEGORY -- 1B

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Contents are FLAMMABLE. Keep away from heat, sparks, and open flame.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves,  
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electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved container with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

OTHER PRECAUTIONS

Certain colors contain Lead (See PRODUCT LABEL). Do not apply Lead-containing colors on toys or other children's articles, furniture, or any interior surface of a dwelling or facility which may be occupied or used by children. Do not apply on any exterior surface of dwelling units, such as window sills, porches, stairs, or railings to which children may be commonly exposed.

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

# Safety Data Sheet

**RUST-OLEUM**  
CORPORATION  
\* Trusted Quality Since 1921 \*  
www.rustoleum.com

## 1. Identification

**Product Name:** STRUST SSPR 6PK METALC SILVER      **Revision Date:** 5/15/2015

**Product Identifier:** 7271830      **Supersedes Date:** New SDS

**Product Use/Class:** Topcoat Aerosol

**Supplier:** Rust-Oleum Corporation      **Manufacturer:** Rust-Oleum Corporation  
11 Hawthorn Parkway      11 Hawthorn Parkway  
Vernon Hills, IL 60061      Vernon Hills, IL 60061  
USA      USA

**Preparer:** Regulatory Department

**Emergency Telephone:** 24 Hour Hotline: 847-367-7700

## 2. Hazard Identification

**EMERGENCY OVERVIEW:** Harmful if swallowed. Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion. Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. May cause eye, skin, or respiratory tract irritation. KEEP OUT OF REACH OF CHILDREN. Harmful if inhaled. Causes eye irritation. Use ventilation necessary to keep exposures below recommended exposure limits, if any. Vapor Harmful. Causes Eye, Skin, Nose, and Throat Irritation.

### Classification

#### Symbol(s) of Product



### Signal Word

Danger

### Possible Hazards

53% of the mixture consists of ingredient(s) of unknown acute toxicity

### GHS HAZARD STATEMENTS

Flammable Aerosol, category 1	H222	Extremely flammable aerosol.
Flammable Liquid, category 1	H224	Extremely flammable liquid and vapor.
Acute Toxicity, Oral, category 5	H303	May be harmful if swallowed.
Acute Toxicity, Dermal, category 5	H313	May be harmful in contact with skin.
Skin Irritation, category 2	H315	Causes skin irritation.
Eye Irritation, category 2	H319	Causes serious eye irritation.
Acute Toxicity, Inhalation, category 4	H332	Harmful if inhaled.
STOT, single exposure, category 3, RTI	H335	May cause respiratory irritation.
STOT, single exposure, category 3, NE	H336	May cause drowsiness or dizziness.
Aspiration Hazard, category 2	H305	May be harmful if swallowed and enters airways.
Eye Irritation, category 2B	H320	Causes eye irritation.
Flammable Aerosol, category 1	H280	Contains gas under pressure; may explode if heated.

Reproductive Toxicity, category 2	H361	Suspected of damaging fertility or the unborn child. Classified Category 2 suspected human reproductive toxicant irreversible effects such as structural malfunctions, embryo/foetal lethality, post natal functional deficiencies.
STOT, repeated exposure, category 2	H373	May cause damage to organs <or state all organs affected, if known> through prolonged or repeated exposure <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.
Acute Toxicity, Oral, category 4	H302	Harmful if swallowed.

#### GHS LABEL PRECAUTIONARY STATEMENTS

P211	Do not spray on an open flame or other ignition source.
P251	Pressurized container: Do not pierce or burn, even after use.
P375	Fight fire remotely due to the risk of explosion.
P102	Keep out of reach of children.
P103	Read label before use.
P234	Keep only in original container.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P262	Do not get in eyes, on skin, or on clothing.
P264	Wash ... thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P281	Use personal protective equipment as required.
P285	In case of inadequate ventilation wear respiratory protection.
P374	Fight fire with normal precautions from a reasonable distance.
P402	Store in a dry place.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F.
P403+P235	Store in a well-ventilated place. Keep cool.
P362	Take off contaminated clothing and wash before reuse.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P201	Obtain special instructions before use.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P350	Gently wash with plenty of soap and water.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.

### 3. Composition/Information On Ingredients

#### HAZARDOUS SUBSTANCES

<u>Chemical Name</u>	<u>CAS-No.</u>	<u>Wt. % Range</u>	<u>GHS Symbols</u>	<u>GHS Statements</u>
Toluene	108-88-3	25-50	GHS02-GHS07-GHS08	H225-302-332-361-336-373-315
Acetone	67-64-1	10-25	GHS02-GHS07	H225-336-319
Propane	74-98-6	10-25		
n-Butane	106-97-8	2.5-10		
Xylene (mixed isomers)	1330-20-7	1.0-2.5	GHS02-GHS07	H226-312-332-315
Aluminum Flake	7429-90-5	1.0-2.5	GHS02	H228-261
Butyl Benzyl Phthalate	85-68-7	1.0-2.5	GHS06	H331
Ethylbenzene	100-41-4	0.1-1.0	GHS02-GHS07	H225-332

The text for GHS Hazard Statements shown above (if any) is given in the "16. Other Information" section.

#### 4. First-aid Measures

**FIRST AID - EYE CONTACT:** Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

**FIRST AID - SKIN CONTACT:** Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

**FIRST AID - INHALATION:** If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation.

**FIRST AID - INGESTION:** Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention. If swallowed, get medical attention.

#### 5. Fire-fighting Measures

**EXTINGUISHING MEDIA:** Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** FLASH POINT IS LESS THAN 20°F. EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. Closed containers may explode when exposed to extreme heat due to buildup of steam. No unusual fire or explosion hazards noted.

**SPECIAL FIREFIGHTING PROCEDURES:** Evacuate area and fight fire from a safe distance. Full protective equipment including self-contained breathing apparatus should be used. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

#### 6. Accidental Release Measures

**STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:** Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Ventilate area, isolate spilled material, and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.

#### 7. Handling and Storage

**HANDLING:** Wash thoroughly after handling. Wash hands before eating. Use only in a well-ventilated area. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Remove contaminated clothing and launder before reuse. Use only with adequate ventilation. Avoid contact with eyes, skin and clothing.

**STORAGE:** Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials. Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep away from heat, sparks, flame and sources of ignition. Avoid excess heat.

#### 8. Exposure Controls/Personal Protection

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV- TWA	ACGIH TLV- STEL	OSHA PEL-TWA	OSHA PEL- CEILING
Toluene	108-88-3	35.0	20 ppm	N.E.	200 ppm	300 ppm
Acetone	67-64-1	25.0	500 ppm	750 ppm	1000 ppm	N.E.
Propane	74-98-6	25.0	1000 ppm	N.E.	1000 ppm	N.E.
n-Butane	106-97-8	10.0	1000 ppm	1000 ppm	N.E.	N.E.
Xylene (mixed isomers)	1330-20-7	5.0	100 ppm	150 ppm	100 ppm	N.E.
Aluminum Flake	7429-90-5	5.0	1 mg/m <sup>3</sup>	N.E.	15 mg/m <sup>3</sup> [Total Dust]	N.E.
Butyl Benzyl Phthalate	85-68-7	5.0	N.E.	N.E.	N.E.	N.E.
Ethylbenzene	100-41-4	1.0	20 ppm	125 ppm	100 ppm	N.E.

#### PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits.

**RESPIRATORY PROTECTION:** A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

**SKIN PROTECTION:** Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection. Use gloves to prevent prolonged skin contact.

**EYE PROTECTION:** Use safety eyewear designed to protect against splash of liquids.

**OTHER PROTECTIVE EQUIPMENT:** Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application. Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications.

**HYGIENIC PRACTICES:** Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

## 9. Physical and Chemical Properties

Appearance:	Aerosolized Mist	Physical State:	Liquid
Odor:	Solvent Like	Odor Threshold:	N.E.
Relative Density:	0.739	pH:	N.D.
Freeze Point, °C:	N.D.	Viscosity:	N.D.
Solubility in Water:	Slight	Partition Coefficient, n-octanol/water:	No Information
Decomposition Temp., °C:	No Information	Explosive Limits, vol%:	0.9 - 14.3
Boiling Range, °C:	-11 - 467	Flash Point, °C:	-105
Flammability:	Does not Support Combustion	Auto-ignition Temp., °C:	No Information
Evaporation Rate:	Faster than Ether	Vapor Pressure:	N.D.
Vapor Density:	Heavier than Air		

(See "Other information" Section for abbreviation legend)

## 10. Stability and Reactivity

**CONDITIONS TO AVOID:** Flammable hydrogen gas will evolve when product comes in contact with water or damp air. Heat will be generated. The amount of heat generated will depend upon the volume of material in contact. Avoid temperatures above 120 ° F. Avoid all possible sources of ignition. Avoid contact with strong acid and strong bases.

**INCOMPATIBILITY:** Incompatible with strong oxidizing agents, strong acids and strong alkalis.

**HAZARDOUS DECOMPOSITION:** By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde.

**HAZARDOUS POLYMERIZATION:** Will not occur under normal conditions.

**STABILITY:** This product is stable under normal storage conditions.

## 11. Toxicological information

**EFFECTS OF OVEREXPOSURE - EYE CONTACT:** Causes Serious Eye Irritation

**EFFECTS OF OVEREXPOSURE - SKIN CONTACT:** May be absorbed through the skin in harmful amounts. Substance may cause slight skin irritation. Prolonged or repeated contact may cause skin irritation. May cause skin irritation. Allergic reactions are possible.

**EFFECTS OF OVEREXPOSURE - INHALATION:** Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Prolonged or excessive inhalation may cause respiratory tract irritation.

**EFFECTS OF OVEREXPOSURE - INGESTION:** Aspiration hazard if swallowed; can enter lungs and cause damage. Harmful if swallowed.

**EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS:** IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and

prolonged occupational overexposure to solvents with permanent brain and nervous system damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage.

**PRIMARY ROUTE(S) OF ENTRY:** Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

#### ACUTE TOXICITY VALUES

The acute effects of this product have not been tested. Data on individual components are tabulated below:

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
108-88-3	Toluene	636 mg/kg Rat	8390 mg/kg Rabbit	12.5 mg/L Rat
74-98-6	Propane	N.I.	N.I.	658 mg/L Rat
1330-20-7	Xylene (mixed isomers)	4300 mg/kg Rat	N.I.	47635 mg/L Rat
85-68-7	Butyl Benzyl Phthalate	2330 mg/kg Rat	N.I.	>6.7 mg/L Rat
100-41-4	Ethylbenzene	3500 mg/kg Rat	15354 mg/kg Rabbit	17.2 mg/L Rat

N.I. - No Information

## 12. Ecological Information

**ECOLOGICAL INFORMATION:** Product is a mixture of listed components. Product is a mixture of listed components.

## 13. Disposal Information

**DISPOSAL INFORMATION:** Dispose of material in accordance to local, state, and federal regulations and ordinances. Do not allow to enter waterways, wastewater, soil, storm drains or sewer systems.

## 14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)	TDG (Canada)
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols	Paint Products in Limited Quantities
Hazard Class:	N.A.	2.1	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

## 15. Regulatory Information

### U.S. Federal Regulations:

#### CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

#### Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Toluene	108-88-3
Xylene (mixed isomers)	1330-20-7
Aluminum Flake	7429-90-5
Ethylbenzene	100-41-4

**Toxic Substances Control Act:**

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(b) if exported from the United States:

No TSCA 12(b) components exist in this product.

**CALIFORNIA PROPOSITION 65:**

WARNING: This product contains a substance known to the State of California to cause cancer.

<u>Chemical Name</u>	<u>CAS-No.</u>
Ethylbenzene	100-41-4
Benzene	71-43-2
Crystalline Silica / Quartz	14808-60-7
Cristobalite	14464-46-1
Naphthalene	91-20-3

**CALIFORNIA PROPOSITION 65 REPRODUCTIVE TOXINS**

WARNING: This product contains a substance known to the State of California to cause birth defects or other reproductive harm.

<u>Chemical Name</u>	<u>CAS-No.</u>
Toluene	108-88-3
Butyl Benzyl Phthalate	85-68-7
Benzene	71-43-2

**International Regulations:****CANADIAN WHMIS:**

This SDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

**16. Other Information****HMIS RATINGS**

Health: 2\*    Flammability: 4    Physical Hazard: 0    Personal Protection: X

CANADIAN WHMIS CLASS: AB5 D2A

**NFPA RATINGS**

Health: 2    Flammability: 4    Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 586

MSDS REVISION DATE: 5/15/2015

REASON FOR REVISION: No Information

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

**Text for GHS Hazard Statements shown in Section 3 describing each ingredient:**

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H228	Flammable solid.
H261	In contact with water releases flammable gases.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child. Classified Category 2 suspected human reproductive toxicant irreversible effects such as structural malfunctions, embryo/foetal lethality, post natal functional deficiencies.
H373	May cause damage to organs <or state all organs affected, if known> through prolonged or repeated exposure <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.

**Icons for GHS Pictograms shown in Section 3 describing each ingredient:**

GHS02



GHS06



GHS07



GHS08



Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.



Revision Number: 001.1

Issue date: 10/13/2014

**1. PRODUCT AND COMPANY IDENTIFICATION**

Product name: OSI Quad Window, Door, and Siding VOC Advanced Formula Sealant IDH number: 1637238 - Gray  
 Product type: Sealant  
 Restriction of Use: None identified Region: United States  
 Company address: Contact information:  
 Henkel Corporation Telephone: +1 (800) 524-7767  
 One Henkel Way MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711 TRANSPORT EMERGENCY  
 Rocky Hill, Connecticut 06067 Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887

**2. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

**WARNING:** ABRASION COULD RELEASE RESPIRABLE PARTICLES OF SILICA QUARTZ, A CANCER HAZARD BY INHALATION. NORMAL USE OF THIS PRODUCT CAUSES NO SUCH RELEASE.  
  
 CAUSES SKIN IRRITATION.  
 CAUSES SERIOUS EYE IRRITATION.

HAZARD CLASS	HAZARD CATEGORY
SKIN IRRITATION	2
EYE IRRITATION	2A

**PICTOGRAM(S)**



**Precautionary Statements**

**Prevention:** Wash thoroughly after handling. Wear eye and face protection. Wear protective gloves.  
**Response:** IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. If skin irritation occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing.  
**Storage:** Not prescribed  
**Disposal:** Not prescribed

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

IDH number: 1637238

Product name: OSI Quad Window, Door, and Siding VOC Advanced Formula Sealant  
 Page 1 of 7

Hazardous Component(s)	CAS Number	Percentage*
Limestone	1317-65-3	30 - 60
Hydrocarbon resin	Proprietary	10 - 30
4-Chloro- $\alpha,\alpha,\alpha$ -trifluorotoluene	98-56-6	10 - 30
Aliphatic hydrocarbon	Proprietary	10 - 30
Silica, amorphous, fumed, crystal-free	112945-52-5	1 - 5
Xylenes	1330-20-7	1 - 5
Ethylbenzene	100-41-4	0.1 - 1
Quartz (SiO <sub>2</sub> )	14808-60-7	0.1 - 1

\* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

#### 4. FIRST AID MEASURES

<b>Inhalation:</b>	If inhaled, immediately remove the affected person to fresh air. If breathing is difficult, give oxygen. If symptoms develop and persist, get medical attention.
<b>Skin contact:</b>	Immediately wash skin thoroughly with soap and water. If symptoms develop and persist, get medical attention.
<b>Eye contact:</b>	In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.
<b>Ingestion:</b>	Do not induce vomiting, seek medical advice immediately.
<b>Symptoms:</b>	See Section 11.
<b>Notes to physician:</b>	Treat symptomatically and supportively.

#### 5. FIRE FIGHTING MEASURES

<b>Extinguishing media:</b>	Water spray (fog), foam, dry chemical or carbon dioxide.
<b>Special firefighting procedures:</b>	Wear a self-contained breathing apparatus with a full face piece operated in pressure-demand or other positive pressure mode. Wear full protective clothing.
<b>Unusual fire or explosion hazards:</b>	Closed containers may explode when exposed to extreme heat. Fumes and vapors from thermal decompositions vary in composition and toxicity.
<b>Hazardous combustion products:</b>	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

#### 6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

<b>Environmental precautions:</b>	Ventilate area. Wear appropriate protective equipment and clothing during clean-up. Prevent further leakage or spillage if safe to do so. Do not allow product to enter sewer or waterways.
<b>Clean-up methods:</b>	Scrape up spilled material and place in a closed container for disposal. Dispose of according to Federal, State and local governmental regulations.

## 7. HANDLING AND STORAGE

**Handling:** Do not pressurize, cut, heat or weld containers. Empty product containers may contain product residue. Do not reuse empty containers. Use only in well-ventilated areas. Keep out of the reach of children.

**Storage:** For safe storage, store between 0 °C (32°F) and 40 °C (104°F) Keep in a cool, well ventilated area.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Limestone	10 mg/m3 TWA Total dust.	5 mg/m3 PEL Respirable fraction. 15 mg/m3 PEL Total dust.	None	None
Hydrocarbon resin	None	None	None	None
4-Chloro- alpha, alpha, alpha- trifluorotoluene	None	None	None	None
Aliphatic hydrocarbon	None	None	None	None
Silica, amorphous, fumed, crystal-free	10 mg/m3 TWA Inhalable dust. 3 mg/m3 TWA Respirable fraction.	20 MPPCF TWA 0.8 mg/m3 TWA	None	None
Xylenes	100 ppm TWA 150 ppm STEL	100 ppm (435 mg/m3) PEL	None	None
Ethylbenzene	20 ppm TWA	100 ppm (435 mg/m3) PEL	None	None
Quartz (SiO2)	0.025 mg/m3 TWA Respirable fraction.	2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.	None	None

**Engineering controls:** Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.

**Respiratory protection:** Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists. When workplace hazards warrant the use of a respirator, appropriate respirators must be used, and a program that follows 29 CFR 1910.134 must be followed.

**Eye/face protection:** Safety goggles or safety glasses with side shields.

**Skin protection:** Use impermeable gloves and protective clothing as necessary to prevent skin contact.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b>	Solid, Paste
<b>Color:</b>	Various
<b>Odor:</b>	Aromatic
<b>Odor threshold:</b>	Not available.
<b>pH:</b>	Not applicable
<b>Vapor pressure:</b>	8 mm hg (20 °C (68°F))
<b>Boiling point/range:</b>	Not available.
<b>Melting point/ range:</b>	Not available.

Specific gravity:	1.3
Vapor density:	Heavier than air
Flash point:	Product is a solid. Burn Rate: <2.2mm/second
Flammable/Explosive limits - lower:	1 %
Flammable/Explosive limits - upper:	7 %
Autoignition temperature:	Not available.
Evaporation rate:	0.7 Slower than butyl acetate.
Solubility in water:	Insoluble
Partition coefficient (n-octanol/water):	Not available.
VOC content:	1.49 %; 194 g/l (calculated)
Viscosity:	Not available.
Decomposition temperature:	Not available.

## 10. STABILITY AND REACTIVITY

Stability:	Stable
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Incompatible materials:	Strong oxidizing agents.
Reactivity:	Not available.
Conditions to avoid:	Keep away from heat, ignition sources and incompatible materials.

## 11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Inhalation, Skin contact

**Potential Health Effects/Symptoms**

**Inhalation:** Irritates the nose, throat and respiratory system. Exposure to high doses may cause central nervous system depression. Such doses may also cause adverse effects in the liver, kidneys, and lungs. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

**Skin contact:** Prolonged and/or repeated skin contact with this product may cause irritation/dermatitis.

**Eye contact:** Contact with eyes can cause eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

**Ingestion:** Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Limestone	None	Nuisance dust
Hydrocarbon resin	None	No Records
4-Chloro-.alpha.,.alpha.,.alpha.-trifluorotoluene	None	Adrenals, Blood, Central nervous system, Immune system, Irritant, Kidney, Liver, Lung, Skin, Thyroid
Aliphatic hydrocarbon	None	Irritant, Lung
Silica, amorphous, fumed, crystal-free	None	Nuisance dust
Xylenes	Oral LD50 (RAT) = 6,670 mg/kg Oral LD50 (RAT) = 3,523 - 8,600 mg/kg Oral LD50 (RAT) = 4,300 mg/kg Dermal LD50 (RABBIT) = > 43 g/kg Inhalation LC50 (RAT, 4 h) = 6,350 mg/l	Cardiac, Central nervous system, Irritant, Kidney, Liver
Ethylbenzene	Oral LD50 (RAT) = 5.46 g/kg Oral LD50 (RAT) = 3,500 mg/kg Dermal LD50 (RABBIT) = 17,800 mg/kg	Irritant, Central nervous system
Quartz (SiO2)	None	Immune system, Lung, Some evidence of carcinogenicity

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Limestone	No	No	No
Hydrocarbon resin	No	No	No
4-Chloro-.alpha.,.alpha.,.alpha.-trifluorotoluene	No	No	No
Aliphatic hydrocarbon	No	No	No
Silica, amorphous, fumed, crystal-free	No	No	No
Xylenes	No	No	No
Ethylbenzene	No	Group 2B	No
Quartz (SiO2)	Known To Be Human Carcinogen.	Group 1	No

**12. ECOLOGICAL INFORMATION**

**Ecological information:** Harmful to aquatic organisms.

### 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

**Recommended method of disposal:** Dispose of according to Federal, State and local governmental regulations.

**Hazardous waste number:** It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

### 14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

#### U.S. Department of Transportation Ground (49 CFR)

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

#### International Air Transportation (ICAO/IATA)

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

#### Water Transportation (IMO/MDG)

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

### 15. REGULATORY INFORMATION

#### United States Regulatory Information

**TSCA 8 (b) Inventory Status:** All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

**TSCA 12 (b) Export Notification:** Chloro-fluoro solvent (CAS# 98-56-6).

**CERCLA/SARA Section 302 EHS:** None above reporting de minimis  
**CERCLA/SARA Section 311/312:** Immediate Health, Delayed Health  
**CERCLA/SARA Section 313:** This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Xylenes (CAS# 1330-20-7). Ethylbenzene (CAS# 100-41-4).

**California Proposition 65:** This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. This product contains a chemical known in the State of California to cause cancer.

#### Canada Regulatory Information

**CEPA DSL/NDL Status:** All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

### 16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist

Issue date: 10/13/2014

**DISCLAIMER:** The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.



Revision Number: 001.2

Issue date: 12/01/2014

**1. PRODUCT AND COMPANY IDENTIFICATION**

Product name: OSI® QUAD® Advanced Formula Sealant Window, Door & Siding Clear 000  
 IDH number: 827837 - *clear*  
 Product type: Joint sealants  
 Restriction of Use: None identified  
 Region: United States  
 Company address: Henkel Corporation, One Henkel Way, Rocky Hill, Connecticut 06067  
 Contact information: Telephone: +1 (800) 624-7767  
 MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887

**2. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

**WARNING:** FLAMMABLE LIQUID AND VAPOR.  
 CAUSES SKIN IRRITATION.  
 MAY CAUSE AN ALLERGIC SKIN REACTION.  
 CAUSES SERIOUS EYE IRRITATION.  
 MAY CAUSE DROWSINESS OR DIZZINESS.

HAZARD CLASS	HAZARD CATEGORY
FLAMMABLE LIQUID	3
SKIN IRRITATION	2
EYE IRRITATION	2A
SKIN SENSITIZATION	1
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	3

**PICTOGRAM(S)**



**Precautionary Statements**

**Prevention:** Keep away from heat, sparks, open flames, hot surfaces - no smoking. Keep container tightly closed. No release into water. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing vapors, mist, or spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, eye protection, and face protection.

**Response:** If on skin (or hair): Take off immediately all contaminated clothing. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. Call a poison control center or physician if you feel unwell. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing. In case of fire: Use foam, dry chemical or carbon dioxide to extinguish.

**Storage:** Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up.

**Disposal:** Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

IDH number: 827837

Product name: OSI® QUAD® Advanced Formula Sealant Window, Door & Siding Clear 000  
 Page 1 of 6

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Xylenes	1330-20-7	10 - 30
Stoddard solvent, <0.1% Benzene	8052-41-3	10 - 30
Ethylbenzene	100-41-4	5 - 10
Naphthalene	91-20-3	0.1 - 1
2-(2H-Benzotriazol-2-yl)-p-cresol	2440-22-4	0.1 - 1

\* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

### 4. FIRST AID MEASURES

<b>Inhalation:</b>	Move to fresh air in case of accidental inhalation of vapours. Administer oxygen or artificial respiration as needed. Get immediate medical attention.
<b>Skin contact:</b>	Rinse with running water. Apply skin care product. Remove contaminated clothes immediately.
<b>Eye contact:</b>	Rinse immediately with plenty of running water (for 10 minutes). Seek medical attention if necessary.
<b>Ingestion:</b>	Do not induce vomiting. Get immediate medical attention.
<b>Symptoms:</b>	See Section 11.

### 5. FIRE FIGHTING MEASURES

<b>Extinguishing media:</b>	carbon dioxide foam Dry chemical, Water spray or fog.
<b>Special firefighting procedures:</b>	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
<b>Unusual fire or explosion hazards:</b>	Closed containers may rupture (due to build up of pressure) when exposed to extreme heat. Vapors are heavier than air and may travel along floor to an ignition source.
<b>Hazardous combustion products:</b>	Oxides of carbon. Carbon dioxide.

### 6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

<b>Environmental precautions:</b>	Sweep up or gather material and place in appropriate container for disposal. Wash spill area thoroughly. Wear appropriate protective equipment during cleanup. Remove all sources of ignition.
<b>Clean-up methods:</b>	Not available.

## 7. HANDLING AND STORAGE

**Handling:** Keep away from heat, spark and flame. Keep container closed. Do not reuse container. Keep out of the reach of children. Use only with adequate ventilation. "Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode.

**Storage:** Keep away from heat, spark and flame.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Xylenes	100 ppm TWA 150 ppm STEL	100 ppm (435 mg/m <sup>3</sup> ) PEL	None	None
Stoddard solvent, <0.1% Benzene	100 ppm TWA	500 ppm (2,900 mg/m <sup>3</sup> ) PEL	None	None
Ethylbenzene	20 ppm TWA	100 ppm (435 mg/m <sup>3</sup> ) PEL	None	None
Naphthalene	10 ppm TWA (SKIN)	10 ppm (50 mg/m <sup>3</sup> ) PEL	None	None
2-(2H-Benzotriazol-2-yl)-p-cresol	None	None	None	None

**Engineering controls:** Use only in well ventilated areas. Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

**Respiratory protection:** When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

**Eye/face protection:** Wear safety glasses with side shields.

**Skin protection:** Solvent impermeable gloves are required for repeated or prolonged contact.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b>	pasty
<b>Color:</b>	Colorless
<b>Odor:</b>	slightly, of solvent
<b>Odor threshold:</b>	Not available.
<b>pH:</b>	Not applicable
<b>Vapor pressure:</b>	23 mm hg (20 °C (68°F))
<b>Boiling point/range:</b>	137.8 - 193.3 °C (280°F - 379.9 °F) (solvent)
<b>Melting point/ range:</b>	Not available.
<b>Specific gravity:</b>	0.927
<b>Vapor density:</b>	Heavier than air.
<b>Flash point:</b>	26.67 °C (80.01 °F) no method
<b>Flammable/Explosive limits - lower:</b>	1 %
<b>Flammable/Explosive limits - upper:</b>	7 %
<b>Autoignition temperature:</b>	Not available.
<b>Evaporation rate:</b>	Not available.
<b>Solubility in water:</b>	Insoluble
<b>Partition coefficient (n-octanol/water):</b>	Not available.
<b>VOC content:</b>	35 %; 340 g/l
<b>Viscosity:</b>	Not available.
<b>Decomposition temperature:</b>	Not available.

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Not available.
<b>Hazardous reactions:</b>	Will not occur.
<b>Hazardous decomposition products:</b>	Carbon dioxide, carbon monoxide and irritating and/or toxic gases and particulate may be generated by thermal decomposition or combustion.
<b>Incompatible materials:</b>	Strong oxidizing agents.
<b>Reactivity:</b>	Not available.
<b>Conditions to avoid:</b>	Keep away from open flames, hot surfaces and sources of ignition.

## 11. TOXICOLOGICAL INFORMATION

**Relevant routes of exposure:** Skin, Inhalation, Eyes

**Potential Health Effects/Symptoms**

<b>Inhalation:</b>	Vapors may cause headaches, nausea, dizziness and respiratory tract irritation. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Prolonged exposure to solvents may cause adverse effects to the liver, urinary, and reproductive systems. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.
<b>Skin contact:</b>	Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitisation of susceptible persons.
<b>Eye contact:</b>	Symptoms can include irritation, redness, scratching of the cornea, and tearing.
<b>Ingestion:</b>	Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Xylenes	Oral LD50 (RAT) = 6,670 mg/kg Oral LD50 (RAT) = 3,523 - 8,600 mg/kg Oral LD50 (RAT) = 4,300 mg/kg Dermal LD50 (RABBIT) = > 43 g/kg Inhalation LC50 (RAT, 4 h) = 6,350 mg/l	Cardiac, Central nervous system, Irritant, Kidney, Liver
Stoddard solvent, <0.1% Benzene	None	Central nervous system, Irritant
Ethylbenzene	Oral LD50 (RAT) = 5.46 g/kg Oral LD50 (RAT) = 3,500 mg/kg Dermal LD50 (RABBIT) = 17,800 mg/kg	Irritant, Central nervous system
Naphthalene	Oral LD50 (RAT) = 490 mg/kg Oral LD50 (RAT) = 2.6 g/kg Oral LD50 (RAT) = 2,200 mg/kg Oral LD50 (RAT) = 2,400 mg/kg Dermal LD50 (RAT) = > 20 g/kg Dermal LD50 (RABBIT) = > 2.0 g/kg	Blood, Central nervous system, Eyes, Irritant
2-(2H-Benzotriazol-2-yl)-p-cresol	None	No Data

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Xylenes	No	No	No
Stoddard solvent, <0.1% Benzene	No	No	No
Ethylbenzene	No	Group 2B	No
Naphthalene	Reasonably Anticipated to be a Human Carcinogen.	Group 2B	No
2-(2H-Benzotriazol-2-yl)-p-cresol	No	No	No

## 12. ECOLOGICAL INFORMATION

Ecological information: Not available.

## 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of Ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

## 14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

### U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Adhesives  
Hazard class or division: 3  
Identification number: UN 1133  
Packing group: III

### International Air Transportation (ICAO/IATA)

Proper shipping name: Adhesives  
Hazard class or division: 3  
Identification number: UN 1133  
Packing group: III

### Water Transportation (IMO/IMDG)

Proper shipping name: ADHESIVES  
Hazard class or division: 3  
Identification number: UN 1133  
Packing group: III

## 15. REGULATORY INFORMATION

### United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

TSCA 12 (b) Export Notification: None above reporting de minimis

CERCLA/SARA Section 302 EHS: None above reporting de minimis  
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health, Fire  
CERCLA/SARA Section 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Xylenes (CAS# 1330-20-7). Ethylbenzene (CAS# 100-41-4). Naphthalene (CAS# 91-20-3).

California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

### Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

IDH number: 827837

Product name: OSI® QUAD® Advanced Formula Sealant Window, Door & Siding Clear 000  
Page 5 of 6

## 16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist

Issue date: 12/01/2014

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# PURE ASPHALT CO. SAFETY DATA SHEET (SDS)

## SECTION 1: IDENTIFICATION

<b>Product Names</b>	#9900 Alkyd Chassis Paint
<b>Other Names</b>	Solvent Base Paint
<b>Use</b>	Corrosion inhibiting paint
<b>Company</b>	Pure Asphalt Co. 3455 W. 31st Place Chicago, IL Tel: (773) 247-7030 Fax: (773) 247-7066
<b>Emergency Tel.</b>	ChemTrec 800-262-8200

## SECTION 2: HAZARD(S) IDENTIFICATION

<b>GHS HAZARD CLASSIFICATION:</b>	
<b>Physical Hazards</b>	Flammable Liquid Category 2
<b>Health Hazards</b>	Skin irritation Eye irritation Target organ toxicity, repeat exposure Category 2 Category 2 Category 2
<b>LABEL ELEMENTS:</b>	
<b>Signal Word</b>	 Danger
<b>Hazard Statements</b>	H226: Highly Flammable liquid and vapour H315: Causes skin irritation H320: Causes eye irritation H373: May cause damage to organs through prolonged or repeated exposure
<b>Precautionary statements</b>	

<b>Prevention</b>	P210:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.		
	P233:	Keep container tightly closed.		
	P240:	Ground and bond container and receiving equipment.		
	P241:	Use explosion-proof electrical and lighting equipment.		
	P242:	Use only non-sparking tools.		
	P243:	Take precautionary measures against static discharge.		
	P280:	Wear protective gloves, protective clothing, eye protection, and face protection.		
	P260:	Do not breathe mist or spray.		
	P270:	Do not eat, drink or smoke when using this product.		
	P264:	Wash exposed areas thoroughly after handling.		
<b>Response</b>	P370+378:	IN CASE OF FIRE: Use carbon dioxide (CO2), alcohol foam, water fog or dry chemical to extinguish. DO NOT use stream/jet of water as this will spread fire.		
	P303+361+353:	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.		
	P302+352:	IF ON SKIN: Wash with plenty of soap and water.		
	P321:	Specific treatment: Apply hand or body lotion to reduce irritation.		
	P332+313:	If skin irritation occurs: Get medical advice or attention.		
	P362+364:	Take off contaminated clothing and wash it before reuse.		
	P305+351+338:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.		
	P337+313:	If eye irritation persists get medical advice and/or attention.		
	P314:	Get Medical advice/attention if you feel unwell.		
	P331:	Do NOT induce vomiting.		
<b>Storage</b>	P403+235:	Store in a well ventilated place. Keep cool.		
<b>Disposal</b>	P501:	Dispose of contents and container in accordance with local, regional, national, and international regulation.		
<b>Canadian WHMIS</b>	Class B Division 2	Flammable liquid		
<b>SECTION 3: COMPOSITION INFORMATION ON HAZARDOUS INGREDIENTS</b>				
<b>Mixture</b>				

Chemical Name	Common Name	CAS number	Percent by weight
Naphtha, (petroleum) light aliphatic	VM&P Naphtha	64742-89-8	10-20%
Naphtha, (petroleum) hydrotreated light	Naphtha	64742-49-0	10-20%
Xylene (HAP)	Xylol	1330-20-7	1-4%
Hexone (HAP)	MIBK	108-10-1	0-2%
2-Butanone	MEK	78-93-3	0-2%

**SECTION 4: FIRST-AID MEASURES**

<b>General Advice</b>	Take off immediately all contaminated clothing. Get Medical advice/attention if you feel unwell. Wash contaminated clothing before reuse.
<b>Inhalation</b>	Remove person to fresh air and keep comfortable for breathing. Get Medical attention if you feel unwell.
<b>Skin</b>	Take off immediately all contaminated clothing and wash it before reuse. Wash with plenty of soap and water. If skin irritation or a rash occurs: Get medical advice/attention.
<b>Eye</b>	Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do and continue rinsing. If eye irritation persists: Get medical attention.
<b>Ingestion</b>	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Get Medical advice and/or attention if you feel unwell.
<b>Most important symptoms/effects, acute and delayed</b>	Eye irritation. Symptoms may include stinging, tearing, redness, swelling and blurred vision. Skin irritation: May cause redness, itching and/or pain. Inhalation of mist/vapors: Prolonged or repeated exposure may cause chronic effects.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically.

**SECTION 5: FIRE-FIGHTING MEASURES**

<b>Suitable Extinguisher type(s)</b>	Use carbon dioxide (CO2), alcohol foam, water fog or dry chemical to extinguish.
<b>Unsuitable Extinguisher type</b>	Do not use stream or jet of water as this will spread fire.
<b>Specific hazardous arising from fire.</b>	Vaporized material may form explosive mixture with air. Thermal decomposition (burning) will produce oxides of carbon including carbon monoxide and may also produce irritating, corrosive and/or toxic gases, vapors and fumes.
<b>Special protective equipment for fire fighting.</b>	Self-contained breathing apparatus and full protective gear must be worn in case of fire.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

<b>Leak or spill procedures</b>	Remove all sources of ignition. Provide adequate ventilation.
<b>Containment</b>	Contain and absorb with inert material. (e.g. oil dry, sand)
<b>Cleanup</b>	Dispose in accordance with all local, state and federal regulations.
<b>Precautions</b>	In the event of a large spill, contain material and recover for use if possible. Avoid discharge into drains, water courses and the ground.

**SECTION 7: HANDLING AND STORAGE**

<b>Storage</b>	Keep away from ignition sources. Keep containers tightly closed. Store in a cool, dry and well ventilated area.
<b>Handling</b>	Avoid prolonged or repeated skin contact and avoid breathing vapors.
<b>Incompatible Contaminants</b>	Avoid exposure to oxidizing agents.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

<b>Ingredient</b>	<b>CAS #</b>	<b>OSHA PEL</b>	<b>ACGIH TLV-TWA</b>
Naphtha, light aliphatic	64742-89-8	500 ppm	300 ppm
Naphtha, hydrotreated light	64742-49-0	300 ppm	300 ppm
Xylene (HAP)	1330-20-7	100 ppm	100 ppm
Hexone (HAP)	108-10-1	100 ppm	50 ppm
2-Butanone	78-93-3	200 ppm	200 ppm

<b>Engineering Controls</b>	Use with adequate ventilation.
<b>PPE</b>	Eye/Face: Face shield, goggles Skin: Chemical protective gloves. Respiratory: Level of exposure needs to be determined. If required, use a particulate filter, a NIOSH-approved air purifying respirator with organic vapor cartridge or a supplied air respirator.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	
<b>Form</b>	Liquid
<b>Color</b>	Black
<b>Flammability Limits</b>	
<b>Upper</b>	~7.0%
<b>Lower</b>	~0.9%
<b>Odor</b>	Mild Petroleum Odor
<b>Odor Threshold</b>	Not Determined

Vapor Pressure at 20°C	<10.4 kPa			
pH	Not applicable			
Vapor Density (air=1)	>1			
Evaporation Rate	Not Determined			
Specific Gravity, 16°C	1.027			
Melting Point/Range	Not Determined			
Boiling Point/Range	Not Determined			
Solubility	Insoluble			
Partition Coefficient	Not Determined			
Flash Point	16°F to 77°F (-9°C to 25°C)			
Flammability	Category 2			
Auto ignition Temperature	Not Determined			
Decomposition Temperature	Not Determined			
Viscosity	> 200 mm <sup>2</sup> /sec			

**SECTION 10: STABILITY AND REACTIVITY**

<b>Reactivity</b>	
<b>Chemical Stability</b>	Stable
<b>Other</b>	
<b>Hazardous Reactions</b>	Combustion
<b>Polymerization</b>	Will not occur.
<b>Conditions to Avoid</b>	Strong oxidizing agents: sources of ignition.
<b>Incompatible Materials</b>	Strong oxidizing agents
<b>Decomposition Hazards</b>	Combustion products: Oxides of carbon, nitrogen, and sulfur and potentially irritating and/or toxic fumes.

**SECTION 11: TOXICOLOGICAL INFORMATION**

No product toxicological information is available.

<b>Ingredient</b>	<b>CAS#</b>	<b>LD50</b>	<b>LC50</b>
<b>Naphtha, light aliphatic</b>	64742-89-8	Rat: > 8.0 g/kg	Rat: 3400 ppm; 4 h
<b>Naphtha, hydrotreated light</b>	64742-49-0	Rat: > 8.0 g/kg	Rat: 3400 ppm; 4 h
<b>Xylene (HAP)</b>	1330-20-7	Rat: 3.5-8.6 g/kg	Rat: 5000 ppm; 4 h
<b>Hexone (HAP)</b>	108-10-1	Rat: 2.08 g/kg	Rat: 100g/m <sup>3</sup>
<b>2-Butanone</b>	78-93-3	Rat: 2.737 g/kg	Rat: 23.5g/m <sup>3</sup> ; 8 h

<b>Routes of Exposure</b>	
<b>Inhalation</b>	May cause damage to organs through prolonged or repeated exposure
<b>Ingestion</b>	Expect low ingestion hazard. Do NOT induce vomiting.
<b>Skin Contact</b>	Causes skin irritation
<b>Eye Contact</b>	Causes eye irritation

**Delayed, Immediate, and Long Term Exposure** Prolonged or repeated inhalation of petroleum distillates may cause damage to organs.

**Carcinogenicity** Hexone (MIBK) is classified by IARC as Group 2B, "Possibly carcinogenic to humans"

**SECTION 12: ECOLOGICAL INFORMATION**

<b>Eco toxicity</b>	This mixture contains components that are potentially toxic to freshwater and saltwater ecosystems.
<b>Environmental Fate</b>	This material may be harmful to aquatic organisms and may cause long term adverse effects in the aquatic environment.

**SECTION 13: DISPOSAL CONSIDERATIONS**

Hazard characteristic and regulatory waste classification can change with product use. Accordingly, it is the responsibility of the user to determine the proper handling and disposition for disposal according to local, state, federal and international regulations.

**SECTION 14: TRANSPORT INFORMATION**

For Industrial/Professional Use Only-Keep out of reach of Children

**DOT**

Proper shipping name: Paint

Identification Numbers: UN1263

Class or Division: 3

Packing Group: II

Label Codes: 3

Special Provisions: 149, 367, B52, IB2, T4, TP1, TP8, TP28

**Packaging**

Exceptions: 173.150

Non-Bulk: 173.173

Bulk: 173.242

**Quantity Limitations**

Passenger Aircraft/Rail: 5 L

Cargo Aircraft Only: 60L

**Vessel Stowage**

Location: B

Other:

**SECTION 15: REGULATORY INFORMATION**

**TSCA**

All components are listed or exempt from listing on the TSCA inventory.

**Sara Title III, Section 313**

No, None

**Sara Title III, Section 311, 312**

Fire Hazard

**SECTION 16: OTHER INFORMATION**

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind expressed or implied is made with respect to the information contained herein.

# Safety Data Sheet

Product Name: Z GUARD™ 1021FRX

ID: TB002 V5



## \*\*\* Section 1 - Chemical Product and Company Identification \*\*\*

Product Trade Name: Z GUARD™ 1021 FRX

### Manufacturer Information

Z Technologies Corporation  
Contact Phone: (313) 937-0710  
Redford, MI 48239  
Contact Phone: (313) 937-0710

For Chemical Emergency; Spill, Leak, Fire, Exposure, or Accident: Call  
CHEMTREC Day or Night. Chemtrec Customer # CCN649135  
Within USA and Canada: **1-800-424-9300**;  
Outside USA and Canada: **+1 703-527-3887** (collect calls accepted)

## \*\*\* Section 2 - Hazards Identification \*\*\*

### Emergency Overview:

**WARNING!** - Contact with this material may cause irritation to the skin, eyes and mucous membranes.

### Eye Contact:

This product is irritating to the eyes.

### Skin Contact:

This product may irritate the skin. Contact with the skin or mucous membranes may cause irritation. A component in the product may induce skin sanitization.

### Skin Absorption:

A component of this product may be absorbed through the skin.

### Ingestion:

This product may cause irritation to the throat, esophagus, and gastrointestinal tract if it is swallowed.

### Inhalation:

Inhalation of dusts or mists of this product may cause irritation to the nasal passages and respiratory tract.

### Medical Conditions Aggravated by Exposure:

Pre-existing eye, skin, gastrointestinal and respiratory disorders may be aggravated by exposure.



# Safety Data Sheet



Product Name: Z GUARD™ 1021FRX

ID: TB002 V5

## \*\*\* Section 3 - Composition / Information on Ingredients \*\*\*

Description	CAS#	% BY WT	% BY VOL	FLASH POINT (TCC)
WOLLASTONITE	13983-17-0	41.1%	18.7%	> 300 F
ASPHALT	64742 93 4	27.2%	36.4%	> 300 F
STODDARD SOLVENT	8052 41 3	12.6%	17.0%	> 110 F
VM&P NAPHTHA	64742 49 0	8.7%	13.0%	69 F
ACETONE	67 64 1	8.5%	13.2%	2 F
MONTMORILLONITE CLAY	139264-88-3	1.9%	1.3%	> 300 F

### Additional Information:

This product is not considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

## \*\*\* Section 4 - First Aid Measures \*\*\*

### Eye Contact:

If this chemical contacts the eyes, immediately wash the eyes with large amounts of water, occasionally lifting the lower and upper lids. Get medical attention immediately. Do not wear contact lenses when working with any chemicals.

### Skin Contact:

If this chemical contacts the skin wash the contaminated skin with soap and water. If this chemical penetrates the clothing, immediately remove the clothing and wash the skin with water. If symptoms occur after washing, get medical attention immediately.

### Ingestion:

If this chemical has been swallowed, get medical attention immediately. Give victim several glasses of water to drink. Vomiting may occur spontaneously; do not induce vomiting. Do not give anything by mouth to an unconscious person.

### Inhalation:

If a person breathes large amounts of this chemical, move the exposed person to fresh air at once. If breathing difficulty persists or develops, get prompt medical attention.

# Safety Data Sheet



Product Name: Z GUARD™ 1021FRX

ID: TB002 V5

## First Aid: Notes to Physician

No additional information is available.

### \*\*\* Section 5 - Fire Fighting Measures \*\*\*

Auto Ignition, F (C):	>770(>410)	Upper Flammable Limit (UFL):	Not applicable
Flash Point, F(C):	2 F (-16C)	Lower Flammable Limit (LFL):	Not applicable
Flammability Classification:	Flammable		

## Fire & Explosion Hazards:

Unknown.

## Decomposition Products:

Upon decomposition, this product emits carbon monoxide, carbon dioxide, low molecular weight hydrocarbons, toxic nitrogen oxide (NO<sub>x</sub>) fumes and/or toxic sulfur oxide (SO<sub>x</sub>) fumes.

## Extinguishing Media:

Use dry chemical, foam, carbon dioxide, and/or water fog.

## Fire-Fighting Instructions:

Firefighters: Wear full protective clothing including self-contained breathing apparatus. Properly decontaminate all equipment after use.

### \*\*\* Section 6 - Accidental Release Measures \*\*\*

Containment and Clean up procedures must be conducted in accordance with all local, state, and federal regulations.

## Containment Procedures:

Stop the flow of material, if this can be done without risk. Wear appropriate protective equipment and clothing during clean up.

## Clean-Up Procedures:

Absorb spill with inert material and transfer material into appropriate container(s) for disposal. Dispose of collected material according to local, state, and federal regulations

# Safety Data Sheet



Product Name: Z GUARD™ 1021FRX

ID: TB002 V5

**\*\*\* Section 7 - Handling and Storage \*\*\***

**Handling Procedures:**

Wear appropriate personal protective clothing to prevent eye and skin contact. Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists of this product. Use with adequate ventilation. This product is for industrial use only. Do not take internally.

**Storage Procedures:**

Freezing damages this product. Keep container tightly closed when not in use. Store in a cool, well-ventilated area away from incompatible materials.

**\*\*\* Section 8 - Exposure Controls / Personal Protection \*\*\***

**Exposure Guidelines:**

**A: General Product Information**

Follow all applicable exposure limits. Keep formation of airborne mists to a minimum.

**B: Component Exposure Limits**

INGREDIENT	CAS#	% BY WT	TOXICITY		EXPOSURE CONTROLS		
			LD 50 Mg/Kg	LC50	TWA (OSHA)	TLV (ACGIH)	STEL
WOLLASTONITE	13983-17-0	41.1%	not listed on suppliers SDS	not listed on suppliers SDS	not listed on suppliers SDS	not listed on suppliers SDS	not listed on suppliers SDS
ASPHALT	64742 93 4	27.2%	not listed on suppliers SDS	not listed on suppliers SDS	not listed on suppliers SDS	5 Mg/m <sup>3</sup>	not listed on suppliers SDS
STODDARD SOLVENT	8052 41 3	12.6%	> 6 mg/Kg Rat	8500 mg/m <sup>3</sup> 4Hr. Rat	100 ppm	100 ppm	-
VM&P NAPHTHA	64742 49 0	8.7%	intra 40 Mg/Kg mouse	INHAL/ RAT 3400 PPM/4H	500 ppm	300 ppm	

# Safety Data Sheet



Product Name: Z GUARD™ 1021FRX

ID: TB002 V5

ACETONE	67 64 1	8.5%	ORAL acute 5800 mg/Kg rat. 3000 Mg/Kg mouse. 5340Mg/Kg rabbit	VAPOR acute 50100 Mg/m 8 hrs. Rat. 44000mg/m 4 hrs.	1000 ppm	500 ppm A4	750 ppm
MONTMORILLONITE CLAY	139264- 88-3	1.9%	not listed on suppliers SDS	not listed on suppliers SDS	not listed on suppliers SDS	not listed on suppliers SDS	not listed on suppliers SDS

This product contains no EPA Hazardous Air Pollutants (HAP) in amounts > 0.1%.

**Engineering Controls:**

Set up ventilation to effectively remove and prevent buildup of any vapor or mist generated from the handling of this product.

**PERSONAL PROTECTIVE EQUIPMENT**

**Eyes/Face Protective Equipment:**

Wear appropriate eye protection to prevent eye contact.

**Skin Protection:**

Wear appropriate personal protective clothing to prevent skin contact. The worker should immediately wash the skin when it becomes contaminated.

**Respiratory Protection:**

If ventilation is not sufficient to effectively prevent buildup of mists or vapors, provide appropriate NIOSH/MSHA respiratory protection.

**Personal Protective Equipment:**

Provide eyewash fountains in areas where there is any possibility that workers could be exposed to the substance; this is irrespective of the recommendation involving the wearing of eye protection.

Provide facilities for quickly drenching the body within the immediate work area for emergency use where there is a possibility of exposure. Depending on the specific circumstances, a deluge shower, a sink or hose could be considered adequate.

# Safety Data Sheet



Product Name: Z GUARD™ 1021FRX

ID: TB002 V5

### \*\*\* Section 9 - Physical & Chemical Properties \*\*\*

<b>Physical State:</b>	Liquid	<b>Appearance:</b>	Black Liquid
<b>Odor:</b>	Solvent	<b>Vapor Pressure:</b>	<10
<b>Vapor Density:</b>	>1	<b>Boiling Point:</b>	>347°F (175 °C)
<b>Specific Gravity:</b>	1.15	<b>pH:</b>	NA
<b>Viscosity:</b>	ND	<b>VOC coating<sup>1</sup></b>	2.52 lbs/gal ,( 305 g/L)
<b>Solubility in Water:</b>	Not Miscible	<b>Percent Solids (by weight):</b>	(by 67±2
<b>VOC Material<sup>2</sup></b>	2.19 lbs/gal(265 g/L)		

1. Also referred to as the regulatory VOC or the VOC less water and exempt compounds.
2. Also referred to as the actual VOC

### \*\*\* Section 10 - Chemical Stability & Reactivity Information \*\*\*

**Chemical Stability:**

Stable under normal conditions.

**Conditions to Avoid:**

- Avoid freezing.
- Keep away from incompatible materials.

**Incompatibility:**

Do not expose this product to strong oxidizers.

**Decomposition Products:**

Upon decomposition, this product emits carbon monoxide, carbon dioxide, low molecular weight hydrocarbons, toxic sulfur oxide (SO<sub>x</sub>) fumes and/or nitrogen oxide (NO<sub>x</sub>) fumes.

**Hazardous Polymerization:**

Will not occur.

### \*\*\* Section 11 - Toxicological Information \*\*\*

**Acute Toxicity:**

**A: General Product Information**

INGREDIENT	CAS#	% BY WT	TOXICITY		EXPOSURE CONTROLS		
			LD 50 Mg/Kg	LC50	TWA (OSHA)	TLV (ACGIH)	STEL
WOLLASTONITE	13983-17-0	41.1%	not listed on suppliers SDS				

# Safety Data Sheet



Product Name: Z GUARD™ 1021FRX

ID: TB002 V5

ASPHALT	64742 93 4	27.2%	not listed on suppliers SDS	not listed on suppliers SDS	not listed on suppliers SDS	5 Mg/m <sup>3</sup>	not listed on suppliers SDS
STODDARD SOLVENT	8052 41 3	12.6%	> 6 mg/Kg Rat	8500 mg/m <sup>3</sup> 4Hr. Rat	100 ppm	100 ppm	-
VM&P NAPHTHA	64742 49 0	8.7%	intra 40 Mg/Kg mouse	INHAI./ RAT 3400 PPM/4H	500 ppm	300 ppm	
ACETONE	67 64 1	8.5%	ORAL acute 5800 mg/Kg rat. 3000 Mg/Kg mouse. 5340Mg/Kg rabbit	VAPOR acute 50100 Mg/m 8 hrs. Rat. 44000mg/m 4 hrs.	1000 ppm	500 ppm A4	750 ppm
MONTMORILLONITE CLAY	139264 88-3	1.9%	not listed on suppliers SDS	not listed on suppliers SDS	not listed on suppliers SDS	not listed on suppliers SDS	not listed on suppliers SDS

This product contains no EPA Hazardous Air Pollutants (HAP) in amounts > 0.1%.

**Carcinogenicity:**

**A: General Product Information**

No information is available for the product.

**B: Component Carcinogenicity**

None of this product's components are on IARC or NTP lists.

**Chronic Toxicity**

No information is available for the product.

**Other Toxicological Information:**

No information is available for the product.

# Safety Data Sheet

Product Name: Z GUARD™ 1021FRX

ID: TB002 V5



## \*\*\* Section 12 - Ecological Information \*\*\*

### Ecotoxicity:

#### A: General Product Information

No data is available for this product.

#### B: Component Analysis - Ecotoxicity - Aquatic Toxicity

No ecotoxicity data are available for this product's components.

### Environmental Fate:

Product and solutions may be toxic to fish and wildlife. Do not discharge to natural waterways. Avoid contaminating public water supplies.

## \*\*\* Section 13 - Disposal Considerations \*\*\*

Wastes must be tested using methods described in 40 CFR Part 261. It is the generator's responsibility to determine if the waste meets applicable definitions of hazardous wastes. State and local regulations may differ from Federal disposal regulations. Dispose of waste material according to Local, State, Federal and Provincial Environmental Regulations.

## \*\*\* Section 14 - Transportation Information \*\*\*

### US DOT Information

Proper Shipping Name	Petroleum Distillates nos
Hazard Class	3
UN / NA Number	1268
Packing Group	II
Labels required	FLAMMABLE LIQUID
Placard	FLAMMABLE LIQUID

# Safety Data Sheet

Product Name: Z GUARD™ 1021FRX

ID: TB002 V5



## \*\*\* Section 15 - Regulatory Information \*\*\*

### US Federal Regulations

#### A: General Product Information

No additional information is available.

#### B: Component Analysis

None of this product's components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

SARA 311/312: Acute: Yes    Chronic: No    Fire: Yes    Pressure: No    Reactive: No

### State Regulations

#### A: General Product Information

No information is available.

#### B: Component Analysis - State

None of this product's components are listed on the state lists from CA, FL, MA, MN, NJ, PA or RI.

### Other Regulations

#### A: General Product Information

All components are on the U.S. EPA TSCA Inventory List.

#### B: Component Analysis - WHMIS IDL

No components are listed in the WHMIS IDL.

# Safety Data Sheet



Product Name: Z GUARD™ 1021FRX

ID: TB002 V5

## \*\*\* Section 16 - Other Information \*\*\*

**NFPA Ratings: Health: 2 Fire: 2 Reactivity: 0 Other:**  
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

**HMIS Ratings: Health: 2 Fire: 2 Reactivity: 0 Personal Protection:**  
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard

### Key/Legend:

ACGIH = American Conference of Governmental Industrial Hygienists	NFPA = National Fire Protection Association
CERCLA = Comprehensive Environmental Response, Compensation and Liability Act	NIOSH = National Institute for Occupational Safety and Health
EPA = Environmental Protection Agency	NTP = National Toxicology Program
HMIS = Hazardous Material Identification System	OSHA = Occupational Safety and Health Administration
IARC = International Agency for Research on Cancer	SARA = Superfund Amendments and Reauthorization Act
MSHA = Mine Safety and Health Administration	TSCA = Toxic Substance Control Act

The information presented herein is believed to be factual as it has been derived from the works and opinions of persons believed to be qualified experts; however, nothing contained in this information is to be taken as a warranty or representation for which Z Technologies, Inc bears legal responsibility. The user should review any recommendations in the specific context of the intended use to determine whether they are appropriate.

**Contact:** Regulatory Affairs  
**Contact Phone:** (313) 937-0710

# MATERIAL SAFETY DATA SHEET

07-466-PP  
33 00

DATE OF PREPARATION  
Mar 25, 2016

**SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION**

**PRODUCT NUMBER**

07-466-PP

**PRODUCT NAME**

Industrial Coatings Quick Dry Metal Primer, Gray

**MANUFACTURER'S NAME**

Columbia Paint & Coatings  
Cleveland, OH 44115

**Telephone Numbers and Websites**

Product Information	(888) 677-8673 www.columbiapaint.com
Regulatory Information	(216) 566-2902
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
<i>*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)</i>	

**SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS**

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
30	64742-89-8	Lt. Aliphatic Hydrocarbon Solvent	ACGIH TLV 300 PPM OSHA PEL 300 PPM	12 mm
6	64742-88-7	Med. Aliphatic Hydrocarbon Solvent	ACGIH TLV 100 PPM OSHA PEL 100 PPM	1.27 mm
0.2	100-41-4	Ethylbenzene	ACGIH TLV 20 PPM OSHA PEL 100 PPM OSHA PEL 125 PPM STEL	7.1 mm
1	1330-20-7	Xylene	ACGIH TLV 100 PPM ACGIH TLV 150 PPM STEL OSHA PEL 100 PPM OSHA PEL 150 PPM STEL	5.9 mm
0.1	14808-60-7	Quartz	ACGIH TLV 0.025 mg/m3 as Resp. Dust OSHA PEL 0.1 mg/m3 as Resp. Dust	
10	14807-96-6	Talc	ACGIH TLV 2 mg/m3 as Resp. Dust OSHA PEL 2 mg/m3 as Resp. Dust	
18	7727-43-7	Barium Sulfate	ACGIH TLV 10 mg/m3 as Dust OSHA PEL 10 mg/m3 Total Dust OSHA PEL 5 mg/m3 Respirable Fraction	
8	13463-67-7	Titanium Dioxide	ACGIH TLV Not Available OSHA PEL Not Available	
0.89		Barium (as Ba; total)		

**SECTION 3 — HAZARDS IDENTIFICATION**

**ROUTES OF EXPOSURE**

INHALATION of vapor or spray mist.  
EYE or SKIN contact with the product, vapor or spray mist.

**HMIS Codes**

Health	2*
Flammability	3
Reactivity	0

**EFFECTS OF OVEREXPOSURE****EYES:** Irritation.**SKIN:** Prolonged or repeated exposure may cause irritation.**INHALATION:** Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:

- the liver
- the urinary system
- the reproductive system

**SIGNS AND SYMPTOMS OF OVEREXPOSURE**

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE**

None generally recognized.

**CANCER INFORMATION**

For complete discussion of toxicology data refer to Section 11.

**SECTION 4 — FIRST AID MEASURES****EYES:** Flush eyes with large amounts of water for 15 minutes. Get medical attention.**SKIN:** Wash affected area thoroughly with soap and water.

Remove contaminated clothing and launder before re-use.

**INHALATION:** If affected, remove from exposure. Restore breathing. Keep warm and quiet.**INGESTION:** Do not induce vomiting. Get medical attention immediately.**SECTION 5 — FIRE FIGHTING MEASURES****FLASH POINT**

50 °F PMCC

**LEL**

0.9

**UEL**

7.0

**FLAMMABILITY CLASSIFICATION**

RED LABEL -- Flammable, Flash below 100 °F (38 °C)

**EXTINGUISHING MEDIA**

Carbon Dioxide, Dry Chemical, Foam

**UNUSUAL FIRE AND EXPLOSION HAZARDS**

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

**SPECIAL FIRE FIGHTING PROCEDURES**

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

**SECTION 6 — ACCIDENTAL RELEASE MEASURES****STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

**SECTION 7 — HANDLING AND STORAGE****STORAGE CATEGORY**

DOL Storage Class IB

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE**

Contents are **FLAMMABLE**. Keep away from heat, sparks, and open flame.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally.

Keep out of the reach of children.

**SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION****PRECAUTIONS TO BE TAKEN IN USE**

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m<sup>3</sup> (total dust), 3 mg/m<sup>3</sup> (respirable fraction), OSHA PEL 15 mg/m<sup>3</sup> (total dust), 5 mg/m<sup>3</sup> (respirable fraction).

#### VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

#### RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding, wirebrushing, abrading, burning or welding the dried film, wear a particulate respirator approved by NIOSH/MSHA for protection against non-volatile materials in Section 2.

#### PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

#### EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

#### OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

### SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	10.24 lb/gal	1227 g/l
SPECIFIC GRAVITY	1.23	
BOILING POINT	240 - 395 °F	115 - 201 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	63%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
	3.94 lb/gal	473 g/l
	3.94 lb/gal	472 g/l
	Less Water and Federally Exempt Solvents	Emitted VOC

### SECTION 10 — STABILITY AND REACTIVITY

#### STABILITY — Stable

#### CONDITIONS TO AVOID

None known.

#### INCOMPATIBILITY

None known.

#### HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide, Oxides of Metals in Section 2

#### HAZARDOUS POLYMERIZATION

Will not occur

### SECTION 11 — TOXICOLOGICAL INFORMATION

#### CHRONIC HEALTH HAZARDS

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations. There is no evidence that ethylbenzene causes cancer in humans.

Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

**TOXICOLOGY DATA**

CAS No.	Ingredient Name			
64742-89-8	Lt. Aliphatic Hydrocarbon Solvent	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
64742-88-7	Med. Aliphatic Hydrocarbon Solvent	LC50 RAT	4HR	Not Available
		LD50 RAT		>5000 mg/kg
100-41-4	Ethylbenzene	LC50 RAT	4HR	Not Available
		LD50 RAT		3500 mg/kg
1330-20-7	Xylene	LC50 RAT	4HR	5000 ppm
		LD50 RAT		4300 mg/kg
14808-60-7	Quartz	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
14807-96-6	Talc	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
7727-43-7	Barium Sulfate	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
13463-67-7	Titanium Dioxide	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available

**SECTION 12 — ECOLOGICAL INFORMATION****ECOTOXICOLOGICAL INFORMATION**

No data available.

**SECTION 13 — DISPOSAL CONSIDERATIONS****WASTE DISPOSAL METHOD**

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Waste must be tested for ignitability and extractability to determine the applicable EPA hazardous waste numbers. Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

**SECTION 14 — TRANSPORT INFORMATION**

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

**US Ground (DOT)**

5 Liters (1.3 Gallons) and Less may be Classed as LTD. QTY. (PAINT OR RELATED).

Larger Containers are Regulated as:

UN1263, PAINT, 3, PG II, (ERG#128)

**DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities**

Xylenes (mixed isomers) 100 lb RQ

**Bulk Containers may be Shipped as (check reportable quantities):**

UN1263, PAINT, 3, PG II, (ERG#128)

**Canada (TDG)**

UN1263, PAINT, 3, PG II, LIMITED QUANTITY, (ERG#128)

**IMO**

5 Liters (1.3 Gallons) and Less may be Shipped as Limited Quantity.

UN1263, PAINT, 3, PG II, (10 C c.c.), EmS F-E, S-E

**IMO**

5 Liters (1.3 Gallons) and Less may be Shipped as Limited Quantity.

UN1263, PAINT, 3, PG II, (10 C c.c.), EmS F-E, S-E

**IATA/ICAO**

UN1263, PAINT, 3, PG II

<b>SECTION 15 — REGULATORY INFORMATION</b>
--

**SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION**

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
100-41-4	Ethylbenzene	0.2	
1330-20-7	Xylene	1	
	Zinc Compound	2	1.2
	Barium Compound	2	0.8

**TSCA CERTIFICATION**

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

<b>SECTION 16 — OTHER INFORMATION</b>
---------------------------------------

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

<p>The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.</p>
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# MATERIAL SAFETY DATA SHEET

R1K4  
14 00

DATE OF PREPARATION  
Feb 1, 2016

## SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NUMBER

R1K4

### PRODUCT NAME

Mineral Spirits

### MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY

101 Prospect Avenue N.W.

Cleveland, OH 44115

### Telephone Numbers and Websites

Product Information	(800) 524-5979 www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)	

## SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
100	64742-88-7	Med. Aliphatic Hydrocarbon Solvent		
		ACGIH TLV	100 PPM	1.27 mm
		OSHA PEL	100 PPM	

## SECTION 3 — HAZARDS IDENTIFICATION

### ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.

EYE or SKIN contact with the product, vapor or spray mist.

### EFFECTS OF OVEREXPOSURE

**EYES:** Irritation.

**SKIN:** Prolonged or repeated exposure may cause irritation.

**INHALATION:** Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

### SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

### CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

### HMIS Codes

Health	2
Flammability	2
Reactivity	0

## SECTION 4 — FIRST AID MEASURES

**EYES:** Flush eyes with large amounts of water for 15 minutes. Get medical attention.

**SKIN:** Wash affected area thoroughly with soap and water.

Remove contaminated clothing and launder before re-use.

**INHALATION:** If affected, remove from exposure. Restore breathing. Keep warm and quiet.

**INGESTION:** Do not induce vomiting. Get medical attention immediately.

## SECTION 5 — FIRE FIGHTING MEASURES

<b>FLASH POINT</b>	<b>LEL</b>	<b>UEL</b>	<b>FLAMMABILITY CLASSIFICATION</b>
105 °F PMCC	1.0	6.0	Combustible, Flash above 99 and below 200 °F

**EXTINGUISHING MEDIA**

Carbon Dioxide, Dry Chemical, Foam

**UNUSUAL FIRE AND EXPLOSION HAZARDS**

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

**SPECIAL FIRE FIGHTING PROCEDURES**

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

**SECTION 6 — ACCIDENTAL RELEASE MEASURES****STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

**SECTION 7 — HANDLING AND STORAGE****STORAGE CATEGORY**

DOL Storage Class II

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE**

Contents are COMBUSTIBLE. Keep away from heat and open flame.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally.

Keep out of the reach of children.

**SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION****PRECAUTIONS TO BE TAKEN IN USE**

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

**VENTILATION**

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

**RESPIRATORY PROTECTION**

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

**PROTECTIVE GLOVES**

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

**EYE PROTECTION**

Wear safety spectacles with unperforated sideshields.

**OTHER PRECAUTIONS**

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

<b>PRODUCT WEIGHT</b>	6.42 lb/gal	769 g/l
<b>SPECIFIC GRAVITY</b>	0.77	
<b>BOILING POINT</b>	300 - 395 °F	148 - 201 °C
<b>MELTING POINT</b>	Not Available	
<b>VOLATILE VOLUME</b>	100%	
<b>EVAPORATION RATE</b>	Slower than ether	
<b>VAPOR DENSITY</b>	Heavier than air	
<b>SOLUBILITY IN WATER</b>	Not Available	
<b>VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)</b>		
6.42 lb/gal	769 g/l	Less Water and Federally Exempt Solvents
6.42 lb/gal	769 g/l	Emitted VOC

## SECTION 10 — STABILITY AND REACTIVITY

### STABILITY — Stable CONDITIONS TO AVOID

None known.

### INCOMPATIBILITY

None known.

### HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

### HAZARDOUS POLYMERIZATION

Will not occur

## SECTION 11 — TOXICOLOGICAL INFORMATION

### CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

### TOXICOLOGY DATA

CAS No.	Ingredient Name			
64742-88-7	Med. Aliphatic Hydrocarbon Solvent			
		LC50 RAT	4HR	Not Available
		LD50 RAT		>5000 mg/kg

## SECTION 12 — ECOLOGICAL INFORMATION

### ECOTOXICOLOGICAL INFORMATION

No data available.

## SECTION 13 — DISPOSAL CONSIDERATIONS

### WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

## SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

### US Ground (DOT)

May be Classed as a Combustible Liquid for U.S. Ground.

UN1263, PAINT RELATED MATERIAL, 3, PG III, (ERG#128)

### Bulk Containers may be Shipped as:

UN1263, PAINT RELATED MATERIAL, 3, PG III, (ERG#128)

### Canada (TDG)

May be Classed as a Combustible Liquid for Canadian Ground.

UN1263, PAINT RELATED MATERIAL, 3, PG III, (ERG#128)

### IMO

5 Liters (1.3 Gallons) and Less may be Shipped as Limited Quantity.

UN1263, PAINT RELATED MATERIAL, 3, PG III, (41 C c.c.), EmS F-E, S-E

### IMO

5 Liters (1.3 Gallons) and Less may be Shipped as Limited Quantity.

UN1263, PAINT RELATED MATERIAL, 3, PG III, (41 C c.c.), EmS F-E, S-E

### IATA/CAO

UN1263, PAINT RELATED MATERIAL, 3, PG III

## SECTION 15 — REGULATORY INFORMATION

### SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
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No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.

### TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

**SECTION 16 — OTHER INFORMATION**

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

# KS Xylol Xylene



HEALTH	*	2
FLAMMABILITY		3
PHYSICAL		0
PPE		X



Printed: 06/27/2011  
Revision: 06/16/2011  
Supersedes Revision: 06/15/2010

## 1. Product and Company Identification

**Product Code:** LL44  
**Product Name:** KS Xylol Xylene  
**Manufacturer Information**  
**Company Name:** W. M. Barr  
2105 Channel Avenue  
Memphis, TN 38113  
**Phone Number:** (901)775-0100  
**Emergency Contact:** 3E 24 Hour Emergency Contact (800)451-8346  
**Information:** W.M. Barr Customer Service (800)398-3892  
**Web site address:** www.wmbarr.com  
**Preparer Name:** W.M. Barr EHS Department (901)775-0100

### Synonyms

GXY24, QXY24, CXY24

## 2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	OSHA PEL	ACGIH TWA	Other Limits
1. Xylene (mixed isomers) {Benzene, dimethyl-}	1330-20-7	60.0 -100.0 %	100 ppm	100 ppm	No data.
2. Ethylbenzene {Ethylbenzol; Phenylethane}	100-41-4	10.0 -30.0 %	100 ppm	100 ppm	No data.
Hazardous Components (Chemical Name)	CAS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Xylene (mixed isomers) {Benzene, dimethyl-}	1330-20-7	No data.	No data.	150 ppm	No data.
2. Ethylbenzene {Ethylbenzol; Phenylethane}	100-41-4	No data.	No data.	125 ppm	No data.

### Additional Chemical Information

Ethylbenzene is a component of Xylene.

## 3. Hazards Identification

### Emergency Overview

Danger! Flammable. Harmful or fatal if swallowed. Vapor harmful.

Keep away from heat, sparks, flame and all other sources of ignition. Vapors may cause flash fire or ignite explosively. Vapors may travel long distances to other areas and rooms away from work site.

### Potential Health Effects (Acute and Chronic)

#### Inhalation Acute Exposure Effects:

Vapor harmful. May cause dizziness, headache, irritation of respiratory tract, weakness, drowsiness, depression of central nervous system, and watering of eyes. Severe overexposure may cause unconsciousness, anesthesia, irregular heartbeat, and death. Intentional misuse of this product by deliberately concentrating and inhaling can be harmful or fatal.

#### Skin Contact Acute Exposure Effects:

This product is a skin irritant. It may be absorbed through the skin. It may cause irritation, dermatitis, drying of skin, and numbness in fingers and arms. May increase severity of symptoms listed under inhalation.

#### Eye Contact Acute Exposure Effects:

This material is an eye irritant. It may cause irritation, redness, stinging, tearing, excessive swelling of the

conjunctiva; and or excessive blinking.

#### Ingestion Acute Exposure Effects:

Harmful or fatal if swallowed. May cause nausea, vomiting, gastrointestinal irritation, or diarrhea.

#### Chronic Exposure Effects:

Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Prolonged or repeated contact may cause dermatitis. May cause skin irritation, permanent central nervous system changes, kidney damage, and liver damage.

#### Signs and Symptoms Of Exposure

See Potential Health Effects.

#### Medical Conditions Generally Aggravated By Exposure

Diseases of the skin, liver, and kidneys.

#### OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations.

## 4. First Aid Measures

#### Emergency and First Aid Procedures

##### Inhalation:

If user experiences breathing difficulty, move to air free of vapors. Administer oxygen or artificial respiration until medical assistance can be rendered.

##### Skin Contact:

Irritation may result. Immediately wash with soap and water.

##### Eye Contact:

Immediately flush with water, remove any contact lenses, continue flushing with water for at least 15 minutes, then get medical attention.

##### Ingestion:

Do not induce vomiting. Call your local poison control center, hospital emergency room, or physician immediately for instructions.

#### Note to Physician

Call your local poison control center for further information.

## 5. Fire Fighting Measures

#### Flammability Classification:

NFPA Class IC flammable liquid

#### Flash Pt:

81 F Method Used: Closed Cup

#### Explosive Limits:

LEL: AP 1% UEL: AP 7%

#### Autoignition Pt:

430 C

#### Fire Fighting Instructions

Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

#### Flammable Properties and Hazards

Flammable Liquid! This material releases vapors at or below ambient temperatures. When mixed with air in certain proportions and exposed to an ignition source, its vapor can cause a flash fire. Use only with adequate ventilation. Vapors are heavier than air and may travel long distances along the ground to an ignition source and flash back. A vapor and air mixture can create an explosion hazard in confined spaces such as sewers. If container is

not properly cooled, it can rupture in the heat of a fire.

#### **Hazardous Combustion Products**

Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons, aldehydes and other products of incomplete combustion.

#### **Extinguishing Media**

Use carbon dioxide, dry powder, or foam.

#### **Unsuitable Extinguishing Media**

No data available.

## **6. Accidental Release Measures**

### **Steps To Be Taken In Case Material Is Released Or Spilled**

Vapors may cause flash fire or ignite explosively.

Clean up: Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep flames, smoking or flames out of hazard area. Use non-sparking tools. Use proper bonding and grounding methods for all equipment and processes. Keep out of waterways and bodies of water. Be cautious of vapors collecting in small enclosed spaces, sewers, low lying areas, confined spaces, etc.

Small spills: Take up with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable.

Large spills: Dike far ahead of spill for later disposal.

Waste Disposal: Dispose in accordance with applicable local, state and federal regulations.

## **7. Handling and Storage**

### **Precautions To Be Taken in Handling**

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

Do not use this product near any source of heat or open flame, furnace areas, pilot lights, stoves, etc.

Do not use in small enclosed spaces, such as basements and bathrooms. Vapors can accumulate and explode if ignited.

Do not spread this product over large surface areas because fire and health safety risks will increase dramatically.

### **Precautions To Be Taken in Storing**

Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

## **8. Exposure Controls/Personal Protection**

### **Respiratory Equipment (Specify Type)**

For OSHA controlled work place and other regular users --Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors. A dust mask does not provided protection against vapors.

**Eye Protection**

Safety glasses, chemical goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

**Protective Gloves**

Wear gloves with as much resistance to the chemical ingredients as possible. Glove materials such as nitrile rubber may provide protection. Glove selection should be based on chemicals being used and conditions of use. Consult your glove supplier for additional information. Gloves contaminated with product should be discarded and not reused.

**Other Protective Clothing**

Various application methods can dictate the use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure.

**Engineering Controls (Ventilation etc.)**

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Use only with adequate ventilation to prevent buildup of vapors. Do not use in areas where vapors can accumulate and concentrate, such as basements, bathrooms or small enclosed areas. Whenever possible, use outdoors in an open air area. If using indoors open all windows and doors and maintain a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea or eye-watering -- STOP -- ventilation is inadequate. Leave area immediately and move to fresh air.

**Work/Hygienic/Maintenance Practices**

Wash hands thoroughly after use and before eating, drinking, or smoking.

Do not eat, drink, or smoke in the work area.

Discard any clothing or other protective equipment that cannot be decontaminated.

Facilities storing or handling this material should be equipped with an emergency eyewash and safety shower.

**9. Physical and Chemical Properties**

<b>Physical States:</b>	[ ] Gas [X] Liquid [ ] Solid
<b>Melting Point:</b>	-48 C - -25 C
<b>Boiling Point:</b>	280 F - 290 F
<b>Autoignition Pt:</b>	430 C
<b>Flash Pt:</b>	81 F Method Used: Closed Cup
<b>Explosive Limits:</b>	LEL: AP 1% UEL: AP 7%
<b>Specific Gravity (Water = 1):</b>	0.87
<b>Density:</b>	7.18 LB/GL at 77 F
<b>Vapor Pressure (vs. Air or mm Hg):</b>	7 MM HG at 20 C
<b>Vapor Density (vs. Air = 1):</b>	No data.
<b>Evaporation Rate (vs Butyl Acetate=1):</b>	No data.
<b>Solubility in Water:</b>	No data.

**Percent Volatile:** 100 % by weight.

**VOC / Volume:** 870 G/L

**HAP / Volume:** 100 % WT

**Appearance and Odor**

Sweet, pungent aromatic  
hydrocarbon

## 10. Stability and Reactivity

**Stability:** Unstable [ ] Stable [ X ]

**Conditions To Avoid - Instability**

No data available.

**Incompatibility - Materials To Avoid**

Incompatible with strong oxidizing agents.

**Hazardous Decomposition Or Byproducts**

Decomposition may produce carbon monoxide and carbon dioxide.

**Hazardous Polymerization:** Will occur [ ] Will not occur [ X ]

**Conditions To Avoid - Hazardous Polymerization**

No data available.

## 11. Toxicological Information

Xylene, all isomers:

Effects from Acute Exposure:

ORAL (LD50), Acute: 4,300 mg/kg [Rat].

INHALATION (LC50), Acute: 4,550 ppm for four hours [Rat].

DERMAL (LD50), Acute: 14,100 uL/kg [Rabbit].

Overexposure to xylene may cause upper respiratory tract irritation, headache, cyanosis, blood serum changes, CNS damage and narcosis. Effects may be increased by the use of alcoholic beverages. Evidence of liver and kidney impairment were reported in workers recovering from a gross over-exposure.

Ethylbenzene:

Effects from Acute Exposure:

ORAL (LD50), Acute: 3,500 mg/kg [Rat].

DERMAL (LD50), Acute: 17,800 uL/kg [Rabbit].

INTRAPERITONEAL (LD50), Acute: 2,624 mg/kg [Rat].

**Chronic Toxicological Effects**

Xylene, all isomers:

Effects from Prolonged or Repeated Exposure:

Impaired neurological function was reported in workers exposed to solvents including xylene. Studies in laboratory animals have shown evidence of impaired hearing following high levels of exposure. Studies in laboratory animals suggest some changes in reproductive organs following high levels of exposure but no significant effects on reproduction were observed. Studies in laboratory animals indicate skeletal and visceral malformations, developmental delays, and increased fetal resorptions following extremely high levels of maternal exposure.

Adverse effects on the liver, kidney, bone marrow (changes in blood cell parameters) were observed in laboratory animals following high levels of exposure. The relevance of these observations to humans is not clear at this time.

**Ethyl Benzene:**

**Effects from Prolonged or Repeated Exposure:**

Findings from a 2-year inhalation study in rodents conducted by NTP were as follows: Effects were observed only at the highest exposure level (750 ppm). At this level the incidence of renal tumors was elevated in male rats (tubular carcinomas) and female rats (tubular adenomas). Also, the incidence of tumors was elevated in male mice (alveolar and bronchiolar carcinomas) and female mice (hepatocellular carcinomas). IARC has classified ethyl benzene as "possibly carcinogenic to humans" (Group 2B). Studies in laboratory animals indicate some evidence of post-implantation deaths following high levels of maternal exposure. The relevance of these findings to humans is not clear at this time. Studies in laboratory animals indicate limited evidence of renal malformations, resorptions, and developmental delays following high levels of maternal exposure. The relevance of these findings to humans is not clear at this time. Studies in laboratory animals indicate some evidence of adverse effects on the liver, kidney, thyroid, and pituitary gland.

**Carcinogenicity/Other Information**

IARC 2B - Possibly Carcinogenic to Humans

ACGIH A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

ACGIH A4 - Not Classifiable as a Human Carcinogen.

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Xylene (mixed isomers) (Benzene, dimethyl-)	1330-20-7	n.a.	n.a.	A4	n.a.
2. Ethylbenzene (Ethylbenzol; Phenylethane)	100-41-4	No	2B	A3	No

**12. Ecological Information**

This mixture contains components that are potentially toxic to freshwater and saltwater ecosystems.

**Biodegradability:** Rapidly biodegradable in aerobic conditions.

**Partition Coefficient (log Kow):** 2 to 3 (based on similar materials)

**Photodegradation:** Based on similar materials, this product will have a significant tendency to partition to air. Hydrocarbons from this product which do partition to air are expected to rapidly photodegrade.

**Stability in Water:** Degradation of this product in water occurs primarily by microbial action.

**Distribution:** Principally to air.

**13. Disposal Considerations**

**Waste Disposal Method**

Dispose in accordance with local, state, and federal regulations.

**14. Transport Information**

**LAND TRANSPORT (US DOT)**

DOT Proper Shipping Name	Xylenes
DOT Hazard Class:	3
DOT Hazard Label:	FLAMMABLE LIQUID
UN/NA Number:	UN1307
Packing Group:	III

**Additional Transport Information**

For D.O.T. information, contact W.M. Barr Technical Services at 1-800-398-3892.

The shipper/supplier may apply one of the following exceptions: Combustible Liquid, Consumer Commodity, Limited Quantity, Viscous Liquid, Does Not Sustain Combustion, or others, as allowed under 49CFR Hazmat Regulations. Please consult 49CFR Subchapter C to ensure that subsequent shipments comply with these

exceptions.

### 15. Regulatory Information

#### US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Xylene (mixed isomers) {Benzene, dimethyl-}	1330-20-7	No	Yes 100 LB	Yes	Yes
2. Ethylbenzene {Ethylbenzol; Phenylethane}	100-41-4	No	Yes 1000 LB	Yes	Yes

#### US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. Xylene (mixed isomers) {Benzene, dimethyl-}	1330-20-7	HAP, ODC ()	Yes	Inventory	No
2. Ethylbenzene {Ethylbenzol; Phenylethane}	100-41-4	HAP, ODC ()	Yes	Inventory, 4 Test	Yes

#### EPA Hazard Categories:

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

- Yes  No Acute (immediate) Health Hazard
- Yes  No Chronic (delayed) Health Hazard
- Yes  No Fire Hazard
- Yes  No Sudden Release of Pressure Hazard
- Yes  No Reactive Hazard

### 16. Other Information

#### Company Policy or Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

# MATERIAL SAFETY DATA SHEET

20008  
08 00

DATE OF PREPARATION  
May 3, 2011

## SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NUMBER**

20008

**PRODUCT NAME**

COLORPLACE® Spray Enamel, Gloss Black

**MANUFACTURER'S NAME**

Distributed by  
WAL-MART Stores Inc.  
Bentonville, AR 72716

**Telephone Numbers and Websites**

Regulatory Information	(216) 566-2902
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300

\*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)

## SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
18	74-98-6	Propane		
		ACGIH TLV	2500 PPM	760 mm
		OSHA PEL	1000 PPM	
17	106-97-8	Butane		
		ACGIH TLV	800 PPM	760 mm
		OSHA PEL	800 PPM	
4	64742-89-8	Lt. Aliphatic Hydrocarbon Solvent		
		ACGIH TLV	100 PPM	53 mm
		OSHA PEL	100 PPM	
5	64742-89-8	V. M. & P. Naphtha		
		ACGIH TLV	300 PPM	12 mm
		OSHA PEL	300 PPM	
		OSHA PEL	400 PPM STEL	
14	108-88-3	Toluene		
		ACGIH TLV	20 PPM	22 mm
		OSHA PEL	100 ppm (Skin)	
		OSHA PEL	150 ppm (Skin) STEL	
1	95-63-6	1,2,4-Trimethylbenzene		
		ACGIH TLV	25 PPM	2.03 mm
		OSHA PEL	25 PPM	
29	67-64-1	Acetone		
		ACGIH TLV	500 PPM	180 mm
		ACGIH TLV	750 PPM STEL	
		OSHA PEL	1000 PPM	
0.6	1333-86-4	Carbon Black		
		ACGIH TLV	3.5 MG/M3	
		OSHA PEL	3.5 MG/M3	

## SECTION 3 — HAZARDS IDENTIFICATION

**ROUTES OF EXPOSURE**

INHALATION of vapor or spray mist.  
EYE or SKIN contact with the product, vapor or spray mist.

**EFFECTS OF OVEREXPOSURE**

**EYES:** Irritation.  
**SKIN:** Prolonged or repeated exposure may cause irritation.  
**INHALATION:** Irritation of the upper respiratory system.

**HMIS Codes**

Health	2*
Flammability	4
Reactivity	0

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:

- the liver
- the urinary system
- the cardiovascular system
- the reproductive system

#### SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists. Redness and itching or burning sensation may indicate eye or excessive skin exposure.

#### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

#### CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

### SECTION 4 — FIRST AID MEASURES

**EYES:** Flush eyes with large amounts of water for 15 minutes. Get medical attention.

**SKIN:** Wash affected area thoroughly with soap and water.

Remove contaminated clothing and laundry before re-use.

**INHALATION:** If affected, remove from exposure. Restore breathing. Keep warm and quiet.

**INGESTION:** Do not induce vomiting. Get medical attention immediately.

### SECTION 5 — FIRE FIGHTING MEASURES

#### FLASH POINT

Propellant < 0 °F

#### LEL

0.9

#### UEL

12.8

#### EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

#### UNUSUAL FIRE AND EXPLOSION HAZARDS

Containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

#### SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

### SECTION 6 — ACCIDENTAL RELEASE MEASURES

#### STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

### SECTION 7 — HANDLING AND STORAGE

#### STORAGE CATEGORY

Not Available

#### PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Contents under pressure. Do not puncture, incinerate, or expose to temperature above 120F. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children.

### SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

#### PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m<sup>3</sup> (total dust), 3 mg/m<sup>3</sup> (respirable fraction), OSHA PEL 15 mg/m<sup>3</sup> (total dust), 5 mg/m<sup>3</sup> (respirable fraction).

#### VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits.

Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

#### RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

**PROTECTIVE GLOVES**

None required for normal application of aerosol products where minimal skin contact is expected. For long or repeated contact, wear chemical resistant gloves.

**EYE PROTECTION**

Wear safety spectacles with unperforated sideshields.

**OTHER PRECAUTIONS**

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

<b>SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES</b>
---

<b>PRODUCT WEIGHT</b>	5.80 lb/gal	694 g/l
<b>SPECIFIC GRAVITY</b>	0.70	
<b>BOILING POINT</b>	<0 - 337 °F	<-18 - 169 °C
<b>MELTING POINT</b>	Not Available	
<b>VOLATILE VOLUME</b>	94%	
<b>EVAPORATION RATE</b>	Faster than ether	
<b>VAPOR DENSITY</b>	Heavier than air	
<b>SOLUBILITY IN WATER</b>	N.A.	
<b>pH</b>	7.0	

**VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)**

Volatile Weight 61.92%

Less Water and Federally Exempt Solvents

<b>SECTION 10 — STABILITY AND REACTIVITY</b>
--

**STABILITY — Stable****CONDITIONS TO AVOID**

None known.

**INCOMPATIBILITY**

None known.

**HAZARDOUS DECOMPOSITION PRODUCTS**

By fire: Carbon Dioxide, Carbon Monoxide

**HAZARDOUS POLYMERIZATION**

Will not occur

<b>SECTION 11 — TOXICOLOGICAL INFORMATION</b>
---

**CHRONIC HEALTH HAZARDS**

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Carbon Black is classified by IARC as possibly carcinogenic to humans (group 2B) based on experimental animal data, however, there is insufficient evidence in humans for its carcinogenicity.

**TOXICOLOGY DATA**

CAS No.	Ingredient Name			
74-98-6	Propane	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
106-97-8	Butane	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
64742-89-8	Lt. Aliphatic Hydrocarbon Solvent	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
64742-89-8	V. M. & P. Naphtha	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
108-88-3	Toluene	LC50 RAT	4HR	4000 ppm
		LD50 RAT		5000 mg/kg
95-63-6	1,2,4-Trimethylbenzene	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
67-64-1	Acetone	LC50 RAT	4HR	Not Available
		LD50 RAT		5800 mg/kg
1333-86-4	Carbon Black	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available

**SECTION 12 — ECOLOGICAL INFORMATION****ECOTOXICOLOGICAL INFORMATION**

No data available.

**SECTION 13 — DISPOSAL CONSIDERATIONS****WASTE DISPOSAL METHOD**

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

**SECTION 14 — TRANSPORT INFORMATION**

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

**US Ground (DOT)**

May be classed as Consumer Commodity, ORM-D

UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, (ERG#126)

**Canada (TDG)**

May be classed as Consumer Commodity, ORM-D

UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, (ERG#126)

**IMO**

May be shipped as Limited Quantity

UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, EmS F-D, S-U, ADR (D)

**IATA/ICAO**

UN1950, AEROSOLS, FLAMMABLE, 2.1, LIMITED QUANTITY

**SECTION 15 — REGULATORY INFORMATION****SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION**

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
108-88-3	Toluene	14	
95-63-6	1,2,4-Trimethylbenzene	1	

**CALIFORNIA PROPOSITION 65**

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

**TSCA CERTIFICATION**

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

**SECTION 16 — OTHER INFORMATION**

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

### Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 08/04/2015

Reviewed on 09/04/2015

**Product identifier**

- **Trade name:** Carbon Steel Electrodes and Rods for Gas Shielded Arc Welding
- **Product number:**
  - Specification: A5.18
  - Classification: E70C-6M, ER70S-2, ER70S-2 (Copper Free), ER70S-3, ER70S-4, ER70S-6, ER70S-6 (Copper Free)
  - Carbon steel electrodes and rods for gas shielded arc welding
- **Relevant identified uses of the substance or mixture and uses advised against:**
  - For professional use only. Use according to manufacturer's specification.
- **Product description:** Carbon steel electrodes and rods for gas shielded arc welding.
- **Application of the substance / the mixture:** Industry specific application.

**Details of the supplier of the safety data sheet**

- **Supplier:**
  - SOWESCO I, LLC
  - 9384 Wallisville Road
  - Houston, TX 77013
  - Telephone: 800-856-9353
- **Emergency telephone number:** 713-688-9353

**Classification of the substance or mixture:**



GHS08 Health hazard

- Carc. 1A      H350 May cause cancer.
- STOT RE 1    H372 Causes damage to organs through prolonged or repeated exposure.



GHS05 Corrosion

- Eye Dam. 1    H318 Causes serious eye damage.



GHS07

- Skin Irrit. 2    H315 Causes skin irritation.
- Skin Sens. 1    H317 May cause an allergic skin reaction.
- STOT SE 3      H335 May cause respiratory irritation.

**Label elements:**

- **GHS label elements**
  - The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**



GHS05    GHS07    GHS08

- **Signal word:** Danger

**Safety Data Sheet (SDS)**

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 08/04/2015

Reviewed on 09/04/2015

**Trade name: Carbon Steel Electrodes and Rods for Gas Shielded Arc Welding**

- **Hazard-determining components of labeling:**

Iron  
Lithium  
Silica  
Nickel  
Titanium Dioxide

- **Hazard statements:**

Causes skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye damage.  
May cause respiratory irritation.  
May cause cancer.  
Causes damage to organs through prolonged or repeated exposure.

- **Precautionary statements:**

Do not handle until all safety precautions have been read and understood.  
Obtain special instructions before use.  
Do not eat, drink or smoke when using this product.  
Do not breathe dust/fume/gas/mist/vapors/spray.  
Use only outdoors or in a well-ventilated area.  
Store in a well-ventilated place. Keep container tightly closed.  
Store locked up.  
Wear respiratory protection.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Wash thoroughly after handling.  
Contaminated work clothing must not be allowed out of the workplace.  
Take off contaminated clothing and wash it before reuse.  
If in eyes: Rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/attention.  
If on skin: Wash with plenty of water.  
If skin irritation or rash occurs: Get medical advice/attention.  
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
Call a poison center/doctor if you feel unwell.  
If exposed or concerned: Get medical advice/attention.  
If experiencing respiratory symptoms: Call a poison center/doctor.  
Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).  
Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Unknown acute toxicity:**

19 percent of the mixture consists of ingredient(s) of unknown toxicity.

- **Classification system:**

**NFPA ratings (scale 0 - 4)**



Health = 2  
Fire = 0  
Reactivity = 0

**HMIS-ratings (scale 0 - 4)**



Health = \*2  
Fire = 0  
Reactivity = 0

- **Hazard(s) not otherwise classified (HNOC):** None known

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**Trade name: Carbon Steel Electrodes and Rods for Gas Shielded Arc Welding****Chemical characterization: Mixtures**· **Description:** Mixture of substances listed below with nonhazardous additions.**Dangerous Components:**

CAS: 7439-89-6 RTECS: NO 4565500	Iron ⚠Flam. Sol. 2, H228; ⚠Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320; Combustible Dust	85-99%
CAS: 13463-67-7	Titanium Dioxide ⚠Carc. 2, H351; ⚠Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	0-10%
CAS: 7440-39-3 RTECS: CQ 8370000	Barium ⚠Water-react. 2, H261	0-10%
CAS: 1317-95-9	Silica ⚠Carc. 1A, H350; ⚠STOT SE 3, H335	0-3%
CAS: 7439-93-2 RTECS: OJ 5540000	Lithium ⚠Water-react. 1, H260; ⚠Skin Corr. 1B, H314	0-9%
CAS: 7429-90-5 RTECS: BD 0330000	Aluminium ⚠Flam. Sol. 2, H228	0-5%
CAS: 7440-21-3	Silicon ⚠Flam. Sol. 2, H228; ⚠Acute Tox. 4, H302; Eye Irrit. 2B, H320	0-1.5%
CAS: 7440-02-0	Nickel ⚠Carc. 2, H351; STOT RE 1, H372; ⚠Skin Sens. 1, H317	0-3%
CAS: 7631-86-9	Silicon Dioxide ⚠Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320	0-2%
CAS: 1344-28-1 RTECS: BD 1200000	Aluminum Oxide ⚠STOT SE 3, H335	0-1%
CAS: 1309-48-4	Magnesium Oxide ⚠Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	0-1%
CAS: 7440-50-8 RTECS: GL 5325000	Copper ⚠STOT SE 3, H335; Aquatic Chronic 4, H413	0-1%
CAS: 7439-98-7 RTECS: QA 4880000	Molybdenum	0-1%
CAS: 7440-44-0 RTECS: FF 5250100	Carbon	0-1%
CAS: 7440-67-7 RTECS: ZH 7070000	Zirconium ⚠Pyr. Sol. 1, H250; Water-react. 1, H260	0-1%
CAS: 7440-32-6 RTECS: XR 1700000	Titanium ⚠Skin Sens. 1, H317; Eye Irrit. 2B, H320	0-0.5%
CAS: 7439-96-5 RTECS: OO 9275000	Manganese ⚠Pyr. Sol. 1, H250; Water-react. 1, H260	0-5%
CAS: 7440-03-1 RTECS: QT9900000	Niobium ⚠Flam. Sol. 1, H228; Combustible Dust	0-0.3%
CAS: 7440-62-2 RTECS: YW 1355000	Vanadium	0-0.3%
CAS: 1317-61-9	Iron Oxide	0-12%

**Additional information**

Note: Certain chemical constituents listed in section 3 may vary depending upon the Classification of the Carbon Steel Electrodes and Rods for Gas Shielded Arc Welding products.

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**Trade name: Carbon Steel Electrodes and Rods for Gas Shielded Arc Welding****Description of first aid measures**• **General information:**

Symptoms of poisoning may occur after several hours; therefore medical observation is advised for at least 48 hours after the accident.

• **After inhalation:**

Supply fresh air. If required, provide artificial respiration. Consult doctor if symptoms persist. In case of unconsciousness, place patient stably in side position for transportation.

• **After skin contact:**

Immediately wash with water and soap and rinse thoroughly. If skin irritation occurs, consult a doctor.

• **After eye contact:**

Do NOT rub eyes. Immediately rinse opened eye(s) for at least 15 minutes under running water, lifting upper and lower lids occasionally. If symptoms persist, consult a physician.

• **After swallowing:**

Rinse out mouth and then drink plenty of water. Do not induce vomiting without medical advice. If swallowed and symptoms occur, consult a doctor.

**Information for doctor**• **Most important symptoms and effects, both acute and delayed:**

No further relevant information available.

• **Indication of any immediate medical attention and special treatment needed:**

No further relevant information available.

**Extinguishing media**• **Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Special hazards arising from the substance or mixture**

Amorphous or crystalline silicon both react exothermically when heated with alkali-metal carbonates attaining incandescence and evolving carbon monoxide. Mixtures of silicon, aluminum, and lead explode when heated. If incinerated, product will release the following toxic fumes: Oxides of silicon, aluminum, magnesium, manganese, iron, copper, molybdenum, carbon, titanium, nickel, niobium, vanadium, barium, lithium, and zirconium, and fluorides and ozone.

**Advice for firefighters**• **Protective equipment:**

As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

**Additional information**

At temperatures above 200 °C, zirconium reacts exothermically with the following: fluorine, chloride, bromide, iodine, halocarbons, carbon tetrachloride, carbon, tetra fluoride and Freon's.

These items are not reactive, flammable, or explosive and essentially not hazardous at ambient temperatures. Welding arcs and sparks can ignite combustibles and flammable products. If involved in a fire, these products may generate irritating aluminum fumes and a variety of metal oxides. Emergency responders must wear personal protection equipment suitable for the situation. Use the extinguishing media recommended for the burning materials and fire situation. See ANSI Z49.1 "Safety in Welding and Cutting" and "Safe Practices" Code: SP, published by the American Welding Society.

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**Trade name: Carbon Steel Electrodes and Rods for Gas Shielded Arc Welding**

- **Personal precautions, protective equipment and emergency procedures:**
  - Ensure adequate ventilation.
  - Wear protective equipment.
  - Keep unprotected persons away.
  - Avoid contact with skin, eyes and clothing.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
  - Ensure adequate ventilation.
  - Pick up mechanically.
  - Dispose contaminated material as waste according to section 13.
  - Dispose of the collected material according to regulations.
- **Reference to other sections:**
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.

**Handling**

- **Precautions for safe handling:**
  - Open and handle receptacle with care.
  - Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:**
  - Keep protective respiratory device available.

**Storage**

- **Conditions for safe storage, including any incompatibilities:**
  - Store away from strong acids, strong bases, strong oxidizing agents and strong reducing agents.
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s):** No further relevant information available.

**Additional information about design of technical systems**

No further data; see section 7.

**Control parameters**

All ventilation should be designed in accordance with OSHA standard (29 CFR 1910.94). Use local exhaust at filling zones and where leakage and dust formation is probable. Use mechanical (general) ventilation for storage areas. Use appropriate ventilation as required to keep Exposure Limits in air below TLV & PEL limits.

**Components with occupational exposure limits:****13463-67-7 Titanium Dioxide**

- PEL Long-term value: 15\* mg/m<sup>3</sup>  
\*total dust
- REL See [Pocket Guide App. A](#)
- TLV Long-term value: 10 mg/m<sup>3</sup>  
withdrawn from NIC

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**Trade name: Carbon Steel Electrodes and Rods for Gas Shielded Arc Welding****7440-39-3 Barium**

- PEL Long-term value: 0.5 mg/m<sup>3</sup>  
as Ba
- REL Long-term value: 0.5 mg/m<sup>3</sup>  
as Ba and soluble compounds
- TLV Long-term value: 0.5 mg/m<sup>3</sup>  
as Ba

**1317-95-9 Silica**

- PEL see Quartz listing
- REL Long-term value: 0.05\* mg/m<sup>3</sup>  
\*respirable dust; See Pocket Guide App. A
- TLV TLV withdrawn

**7429-90-5 Aluminium**

- PEL Long-term value: 15\*; 15\*\* mg/m<sup>3</sup>  
\*total dust; \*\* respirable fraction
- REL Long-term value: 10\* 5\*\* mg/m<sup>3</sup>  
as Al; \*total dust \*\*respirable/pyro powd./welding f.
- TLV Long-term value: 1\* mg/m<sup>3</sup>  
as Al; \*as respirable fraction

**7440-21-3 Silicon**

- PEL Long-term value: 15\* 5\*\* mg/m<sup>3</sup>  
\*total dust \*\*respirable fraction
- REL Long-term value: 10\* 5\*\* mg/m<sup>3</sup>  
\*total dust \*\*respirable fraction
- TLV TLV withdrawn

**7440-02-0 Nickel**

- PEL Long-term value: 1 mg/m<sup>3</sup>
- REL Long-term value: 0.015 mg/m<sup>3</sup>  
as Ni; See Pocket Guide App. A
- TLV Long-term value: 1.5\* mg/m<sup>3</sup>  
elemental, \*inhalable fraction

**7631-86-9 Silicon Dioxide**

- ACGH Short-term value: 3 mg/m<sup>3</sup>  
Long-term value: 10 mg/m<sup>3</sup>
- IDLH Short-term value: 3000 mg/m<sup>3</sup>  
Long-term value: 4 E mg/m<sup>3</sup>  
IDLH: Immediately dangerous to life or health
- TWA Short-term value: 6 mg/m<sup>3</sup>  
Long-term value: 4 E mg/m<sup>3</sup>

**1344-28-1 Aluminium Oxide**

- PEL Long-term value: 15\*; 15\*\* mg/m<sup>3</sup>  
\*total dust \*\* respirable fraction
- REL Long-term value: 10\* 5\*\* mg/m<sup>3</sup>  
as Al; \*total dust\*\*respirable/pyro powd./welding f.
- TLV Long-term value: 1\* mg/m<sup>3</sup>  
as Al; \*as respirable fraction

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**Trade name: Carbon Steel Electrodes and Rods for Gas Shielded Arc Welding****1309-48-4 Magnesium Oxide**

PEL Long-term value: 15\* mg/m<sup>3</sup>  
fume; \*total particulate

TLV Long-term value: 10\* mg/m<sup>3</sup>  
\*as inhalable fraction

**7440-50-8 Copper**

PEL Long-term value: 1\* 0.1\*\* mg/m<sup>3</sup>  
as Cu; \*dusts and mists \*\*fume

REL Long-term value: 1\* 0.1\*\* mg/m<sup>3</sup>  
as Cu; \*dusts and mists \*\*fume

TLV Long-term value: 1\* 0.2\*\* mg/m<sup>3</sup>  
as Cu; \*dusts and mists \*\*fume

**7439-98-7 Molybdenum**

PEL Long-term value: 15\* mg/m<sup>3</sup>  
\*total dust

TLV Long-term value: 10\* 3\*\* mg/m<sup>3</sup>  
as Mo; \*inhalable fraction \*\*respirable fraction

**7440-44-0 Carbon**

PEL Short-term value: 10 A mg/m<sup>3</sup>  
Long-term value: 5 A mg/m<sup>3</sup>

**7440-67-7 Zirconium**

PEL Long-term value: 5 mg/m<sup>3</sup>  
as Zr

REL Short-term value: 10 mg/m<sup>3</sup>  
Long-term value: 5 mg/m<sup>3</sup>  
as Zr

TLV Short-term value: 10 mg/m<sup>3</sup>  
Long-term value: 5 mg/m<sup>3</sup>  
as Zr

**Additional information:** The lists that were valid during the creation of this SDS were used as basis.

**Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
    - Immediately remove all soiled and contaminated clothing and wash before reuse.
    - Wash hands before breaks and at the end of work.
    - Store protective clothing separately.
    - Avoid contact with the eyes and skin.

- **Breathing equipment:**



Suitable respiratory protective device recommended.

Use NIOSH approved or equivalent fume respirator or air supplied respirator when welding, brazing, cutting, grinding, or soldering in a confined space or general work area where local exhaust and/or ventilation does not keep exposure below the limits outlined in section 8. Monitor the air quality inside the welder's helmet, and/or worker's breathing zone to determine if a respirator is required and the type needed.

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**Trade name: Carbon Steel Electrodes and Rods for Gas Shielded Arc Welding****Protection of hands:****Protective gloves**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/the chemical mixture. Select glove material based on penetration times, rates of diffusion and degradation.

**Material of gloves:**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

**Penetration time of glove material:**

The exact break-through time has to be determined and observed by the manufacturer of the protective gloves.

**Eye protection:**

Wear a helmet or face shield with a filter lens around shade number 14. Adjust if needed by selecting the next lighter or darker shade number. See ANSI/ASC Z49.1 Section 4.2 or publication F2.2. Shield other workers by providing screens and flash goggles.

**Body protection:**

Wear approved head, hand, and body protection, which help to prevent injury from radiation, sparks, and electrical shock. This would include wearing welder's gloves and a protective face shield and may include arm protectors, apron, hats, shoulder protection, as well as dark, non-synthetic, substantial clothing. See ANSI Z49.1. Welders should be trained not to allow electrically live parts to contact the skin or wet clothing and gloves. The welders should insulate themselves from the work and ground and should not touch live electrical parts. Welders should not wear short sleeve shirts or short pants.

**Information on basic physical and chemical properties****General Information****Appearance:****Form:**

Metal Cored Wire/Rod or Solid Wire/Rod

**Color:**

Copper or silver/gray metallic color

**Odor:**

Odorless until used

**Odor threshold:**

Not determined.

**pH-value:**

Not applicable.

**Change in condition****Melting point/Melting range:**

Not determined.

**Boiling point/Boiling range:**

Not determined.

**Flash point:**

Not applicable.

**Flammability (solid, gaseous):**

Not determined.

**Ignition temperature:**

Not determined.

**Decomposition temperature:**

Not determined.

**Auto igniting:**

Product is not self-igniting.

**Danger of explosion:**

Product does not present an explosion hazard.

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· <b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
· <b>Vapor pressure:</b>	Not applicable.
· <b>Density:</b>	
<b>Relative density:</b>	Not determined.
<b>Vapor density:</b>	Not applicable.
· <b>Evaporation rate:</b>	Not applicable.
· <b>Solubility in / Miscibility with Water:</b>	Insoluble.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
<b>Solids content:</b>	100.0 %
<b>Other information:</b>	No further relevant information available.

- **Reactivity:** Stable under normal conditions.
- **Chemical stability:** Stable under normal conditions.
- **Possibility of hazardous reactions:** Contact with acids or strong bases may cause generation of gas.
- **Conditions to avoid:** No further relevant information available.
- **Incompatible materials:** Strong acids, strong bases, strong oxidizing agents and strong reducing agents.
- **Hazardous decomposition products:**

Welding fumes and gases cannot be classified simply. The composition and quantity of both are dependent upon the metal being welded, the processes and procedures followed, and the welding consumables used. Other conditions that also influence the composition and quantity of fumes and gases to which workers may be exposed include: coatings on the metal being welded (such as paint, plating, or galvanizing), the number of welders in operation and the volume of the work area, the quality and amount of ventilation, the position of the welder's head with respect to the fume plume, and the presence of contaminants in the atmosphere (such as chlorinated hydrocarbon vapors from cleaning and degreasing procedures). When the electrode is consumed, the fume and gas decomposition products generated are different in percent and form from the ingredients listed in section 8. Fume and gas decomposition, and not the ingredients in the electrode, are important. The concentration of a given fume or gas component may decrease or increase by many times the original concentration. Also, new compounds not in the electrodes may form. The known gases and fumes that may form during welding or cutting and their exposure limits are noted in the list in section 11 below. Decomposition products of normal operation include those originating from the volatilization, reaction, or oxidation of the materials shown in section 8, plus those from the base metal and coating, etc. as noted above. Chlorinated solvents may be decomposed into toxic gases such as phosgene.

It is understood, however, that the elements and/or oxides to be mentioned are virtually always present as complex oxides and not as metals (See "Characterization of Arc Welding Fume", from the American Welding Society). The elements or oxides listed section 8 correspond to the ACGIH categories found in "Threshold Limit Values for Chemical Substances and Physical Agents" listed in section 8. Some products will also contain: Oxides of silicon, aluminum, magnesium, manganese, iron, copper, molybdenum, carbon, titanium, nickel, niobium, vanadium, barium, lithium, and zirconium, and fluorides and ozone. Some elements or compounds may exceed their PELs/TLVs before the total fumes exceed 5 mg/m<sup>3</sup>.

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**Trade name: Carbon Steel Electrodes and Rods for Gas Shielded Arc Welding****Information on toxicological effects**

Effects of Over-Exposure: Electric arc welding may create one or more of the following health hazards:

- ARC RAYS can injure eyes and burn skin. Incidences of skin cancer have been reported.
- ELECTRIC SHOCK can kill.
- FUMES AND GASES GENERATED FROM WELDING can be dangerous to your health.
- PRIMARY ROUTES OF ENTRY are the respiratory system, eyes, skin, and/or indigestion.
- NOISE can damage hearing.

Short-term (acute) over-exposure effects:

- WELDING FUMES may result in discomfort, such as dizziness, nausea, or dryness or irritation of the nose, throat, or eyes.
- ALUMINUM OXIDE may cause irritation of the respiratory system.
- COPPER may cause capillary damage, headache, cold sweat, weak pulse, and kidney and liver damage, central nervous system excitation followed by depression, jaundice, convulsions, paralysis, and coma. Death may occur from shock or renal failure.
- FLUORIDES, FLUORIDE COMPOUNDS may cause skin and eye burns, pulmonary edema, and bronchitis.
- IRON, IRON OXIDE have no known effects. Treat as a nuisance dust or fume.
- MANGANESE, MANGANESE COMPOUNDS may cause metal fume fever, characterized by irritation of the throat, vomiting, nausea, fever, body aches, and chills. Recovery is generally complete within 48 hours of overexposure.
- MAGNESIUM, MAGNESIUM OXIDE overexposure may cause metal fume fever, characterized by metallic taste, tightness of chest, and fever. Symptoms may last 24-48 hours following overexposure.
- MOLYBDENUM may cause irritation of the eyes, nose, and throat.
- NICKEL, NICKEL COMPOUNDS may cause metallic taste, nausea, tightness in chest, fever, and allergic reactions.
- SILICA (amorphous) dust and fumes may cause irritation of the respiratory system, skin, and eyes.
- TITANIUM DIOXIDE may cause irritation of the respiratory system.

Long-term (chronic) over-exposure effects:

- WELDING FUMES in excess levels may cause bronchial asthma, lung fibrosis, pneumoconiosis, or 'siderosis.' Overexposure to air contaminants may lead to their accumulation in the lungs, a condition which may be seen as dense areas on chest x-rays. The severity of the change is proportional to the length of exposure. The changes seen are not necessarily associated with symptoms or signs of reduced lung function or disease. In addition, the changes on X-rays may be caused by non-work factors such as smoking, etc.
- ALUMINUM OXIDE may cause pulmonary fibrosis and emphysema.
- COPPER may cause hepatic cirrhosis, brain damage and demyelination, kidney defects, and copper deposition in the cornea as exemplified by humans with Wilson's disease. It has also been reported that copper poisoning has led to hemolytic anemia and accelerates arteriosclerosis.
- FLUORIDES may cause serious bone erosion (osteoporosis) and mottling of teeth.
- IRON, IRON OXIDE may cause siderosis or deposits of iron in the lungs, which is believed to affect pulmonary function. Lungs will clear in time when exposure to iron fumes and its compounds ceases. Iron and magnetite ( $Fe_3O_4$ ) are not regarded as fibrogenic materials.
- MANGANESE, MANGANESE COMPOUNDS may cause central nervous system effects referred to as 'manganism.' Symptoms include languor, sleepiness, muscular weakness, emotional disturbances, spastic gait, and tremors. Behavioral changes and changes in handwriting may also appear. These effects are irreversible. Employees overexposed to manganese should receive regular medical examinations for early detection of manganism.
- MOLYBDENUM prolonged overexposure may result in loss of appetite, weight loss, loss of muscle coordination, difficulty in breathing, and anemia.

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- NICKEL, NICKEL COMPOUNDS may lung fibrosis or pneumoconiosis. Studies of nickel refinery workers indicated a higher incidence of lung and nasal cancers.
- SILICA (respirable crystalline silica) overexposure may result in silicosis. Respirable crystalline silica is a known human carcinogen. SILICA (amorphous) long term overexposure may cause pneumoconiosis. Noncrystalline forms of silica (amorphous silica) are considered to have little fibrotic potential.
- TITANIUM DIOXIDE may cause pulmonary irritation and slight fibrosis.

• **Acute toxicity:****LD/LC50 values that are relevant for classification:****7439-89-6 Iron**

Oral LD50 7500 mg/kg (rat)

**13463-87-7 Titanium Dioxide**

Oral LD50 &gt;10000 mg/kg (rat)

Dermal LD50 &gt;10000 mg/kg (rabbit)

Inhalative LC50/4 h &gt;6.82 mg/l (rat)

**7429-90-5 Aluminium**

Oral LD50 &gt;2000 mg/kg (rat)

Inhalative LC50/4 h 888 mg/l (rat)

**7440-21-3 Silicon**

Oral LD50 3160 mg/kg (rat)

**7631-86-9 Silicon Dioxide**

Oral LD50 10000 mg/kg (rat) (OECD 401)

Dermal LD50 5000 mg/kg (rabbit) (OECD 402)

Inhalative LC50/4 h >140->2000 mg/l (rat) (OECD 403)  
 Maximum attainable concentration, mortality does not appear.  
 10000 mg/l (zebra fish) (OECD 203)

**7439-98-7 Molybdenum**

Oral LD50 &gt;5000 mg/kg (rat)

Dermal LD50 &gt;2000 mg/kg (rat)

Inhalative LC50/4 h 800 mg/l (trout)  
 >5.84 mg/l (rat)

**Primary irritant effect**• **On the skin:**

Irritant to skin and mucous membranes.  
 May cause an allergic skin reaction.

• **On the eye:**

Strong irritant with the danger of severe eye injury.  
 Causes serious eye irritation.

• **Sensitization:**

Sensitization possible through skin contact.

**Additional toxicological information**

The product shows the following dangers according to internally approved calculation methods for preparations: Irritant.

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**Trade name: Carbon Steel Electrodes and Rods for Gas Shielded Arc Welding****Carcinogenic categories:**· **IARC (International Agency for Research on Cancer):**

- Group 1 - Carcinogenic to humans
- Group 2A - Probably carcinogenic to humans
- Group 2B - Possibly carcinogenic to humans
- Group 3 - Not classifiable as to its carcinogenicity to humans
- Group 4 - Probably not carcinogenic to humans

13463-67-7 Titanium Dioxide	2B
1317-95-9 Silica	1
7440-02-0 Nickel	1
7631-86-9 Silicon Dioxide	3
· <b>NTP (National Toxicology Program):</b>	
1317-95-9 Silica	K
7440-02-0 Nickel	R
· <b>OSHA-Ca (Occupational Safety &amp; Health Administration):</b>	
None of the ingredients are listed.	

**Toxicity:**· **Aquatic toxicity:**

<b>13463-67-7 Titanium Dioxide</b>
EC50 >1000 mg/l (Water flea)
<b>7440-02-0 Nickel</b>
EC50 1.0 mg/l (Water flea)
<b>7631-86-9 Silicon Dioxide</b>
EC50 >1000 mg/l (daphnia) (OECD 202)
<b>7440-50-8 Copper</b>
EC50 0.04-0.05 mg/l (Water flea)

**Persistence and degradability:** No further relevant information available.**Behavior in environmental systems:**

- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.

**Additional ecological information:**· **General notes:**

Do not allow undiluted product or product that has not been neutralized to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

**Results of PBT and vPvB assessment:**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

**Other adverse effects:** No further relevant information available.

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Reviewed on 09/04/2015

**Trade name: Carbon Steel Electrodes and Rods for Gas Shielded Arc Welding****Waste treatment methods:****· Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Observe all federal, state and local environmental regulations when disposing of this material.

**Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

**UN-Number:**

- DOT, ADR, ADN, IMDG, IATA

Non-Regulated Material

**UN proper shipping name:**

- DOT, ADR, ADN, IMDG, IATA

Non-Regulated Material

**Transport hazard class(es):**

- DOT, ADR, ADN, IMDG, IATA

Non-Regulated Material

**Packing group:**

- DOT, ADR, IMDG, IATA

Non-Regulated Material

**Environmental hazards:**

Not applicable.

**Special precautions for user:**

Not applicable.

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:**

Not applicable.

**UN "Model Regulation":**

Non-Regulated Material

**Safety, health and environmental regulations/legislation specific for the substance or mixture:  
SARA (Superfund Amendments and Reauthorization):****· Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

**· Section 313 (Specific toxic chemical listings):**

7440-39-3 Barium

7429-90-5 Aluminium

7440-02-0 Nickel

7440-50-8 Copper

7440-62-2 Vanadium

1344-28-1 Aluminium Oxide

**· TSCA (Toxic Substances Control Act):**

7439-89-6 Iron

13463-67-7 Titanium Dioxide

7440-39-3 Barium

7439-93-2 Lithium

1317-61-9 Iron Oxide

7429-90-5 Aluminium

**Safety Data Sheet (SDS)**

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 08/04/2015

Reviewed on 09/04/2015

**Trade name: Carbon Steel Electrodes and Rods for Gas Shielded Arc Welding**

- 7440-21-3 Silicon
- 7440-02-0 Nickel
- 7439-95-4 Magnesium
- 7631-86-9 Silicon Dioxide
- 1344-28-1 Aluminium Oxide
- 1309-48-4 Magnesium Oxide
- 7440-50-8 Copper
- 7439-98-7 Molybdenum
- 7440-44-0 Carbon

**California Proposition 65:**

**· Chemicals known to cause cancer:**

- 13463-67-7 Titanium Dioxide
- 7440-02-0 Nickel

**· Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

**· Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

**· Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

**Carcinogenic categories:**

**· EPA (Environmental Protection Agency):**

- 7440-39-3 Barium
- 7440-50-8 Copper

D, CBD(inh), NL(oral)  
D

**· TLV (Threshold Limit Value established by ACGIH):**

- 13463-67-7 Titanium Dioxide A4
- 7440-39-3 Barium A4
- 1317-95-9 Silica A2
- 7429-90-5 Aluminium A4
- 7440-02-0 Nickel A5
- 1344-28-1 Aluminium Oxide A4
- 1309-48-4 Magnesium Oxide A4
- 7439-98-7 Molybdenum A3
- 7440-67-7 Zirconium A4

**· NIOSH-Ca (National Institute for Occupational Safety and Health):**

- 13463-67-7 Titanium Dioxide
- 1317-95-9 Silica
- 7440-02-0 Nickel

**Safety Data Sheet (SDS)**

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 08/04/2015

Reviewed on 09/04/2015

**Trade name: Carbon Steel Electrodes and Rods for Gas Shielded Arc Welding**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms:**



GHS05 GHS07 GHS08

- **Signal word: Danger**

- **Hazard-determining components of labeling:**

Iron  
Lithium  
Silica  
Nickel  
Titanium Dioxide

- **Hazard statements:**

Causes skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye damage.  
May cause respiratory irritation.  
May cause cancer.  
Causes damage to organs through prolonged or repeated exposure.

- **Precautionary statements:**

Do not handle until all safety precautions have been read and understood.  
Obtain special instructions before use.  
Do not eat, drink or smoke when using this product.  
Do not breathe dust/fume/gas/mist/vapors/spray.  
Use only outdoors or in a well-ventilated area.  
Store in a well-ventilated place. Keep container tightly closed.  
Store locked up.  
Wear respiratory protection.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Wash thoroughly after handling.  
Contaminated work clothing must not be allowed out of the workplace.  
Take off contaminated clothing and wash it before reuse.  
If in eyes: Rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/attention.  
If on skin: Wash with plenty of water.  
If skin irritation or rash occurs: Get medical advice/attention.  
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
Call a poison center/doctor if you feel unwell.  
If exposed or concerned: Get medical advice/attention.  
If experiencing respiratory symptoms: Call a poison center/doctor.  
Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).  
Dispose of contents/container in accordance with local/regional/national/international regulations.

- **National regulations:**

The product is subject to be classified according with the latest version of the regulations on hazardous substances.

**Safety Data Sheet (SDS)**

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 08/04/2015

Reviewed on 09/04/2015

**Trade name: Carbon Steel Electrodes and Rods for Gas Shielded Arc Welding****State Right to Know:**

CAS: 7439-89-6	Iron	
RTECS: NO 4565500	⊕Flam. Sol. 2, H228; ⊕Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320; Combustible Dust	85-99%
CAS: 13463-67-7	Titanium Dioxide	
	⊕Carc. 2, H351; ⊕Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H33	0-10%
CAS: 7440-39-3	Barium	
RTECS: CQ 8370000	⊕Water-react. 2, H261	0-10%
CAS: 1317-95-9	Silica	
	⊕Carc. 1A, H350; ⊕STOT SE 3, H335	0-3%
CAS: 7439-93-2	Lithium	
RTECS: OJ 5540000	⊕Water-react. 1, H260; ⊕Skin Corr. 1B, H314	0-9%
CAS: 1317-61-9	Iron Oxide	0-12%

All ingredients are listed.

**Information about limitation of use**

- Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SOWESCO urges each end user and recipient of this SDS to study it carefully. If necessary, consult an industrial hygienist or other expert to understand this information and safeguard the environment and protect workers from potential hazards associated with the handling or use of this product. This information is believed to be accurate as of the revision date shown above. However, no warranty, expressed or implied, is given. Because the conditions or methods of use are beyond SOWESCO's control, we assume no liability resulting from the use of this product. Regulatory requirements are subject to change and may differ between various locations. Compliance with all applicable Federal, State, Provincial, and Local laws and regulations remain the responsibility of the user.

- Date of preparation - last revision:** 08/04/2015 - 09/04/2015

**Abbreviations and acronyms:**

ACGIH: American Conference of Governmental Industrial Hygienists  
 Acute Tox. 4: Acute toxicity, Hazard Category 4  
 ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
 ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road  
 Aquatic Chronic 4: Hazardous to the aquatic environment - Chronic Hazard, Category 4  
 Carc. 1A: Carcinogenicity, Hazard Category 1A  
 Carc. 2: Carcinogenicity, Hazard Category 2  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 DOT: US Department of Transportation  
 EINECS: European Inventory of Existing Commercial Chemical Substances  
 ELINCS: European List of Notified Chemical Substances  
 Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1  
 Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A  
 Eye Irrit. 2B: Serious eye damage/eye irritation, Hazard Category 2B  
 Flam. Sol. 1: Flammable solids, Hazard Category 1  
 Flam. Sol. 2: Flammable solids, Hazard Category 2  
 HMIS: Hazardous Materials Identification System (USA)  
 IATA: International Air Transport Association  
 IMDG: International Maritime Code for Dangerous Goods  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent  
 NFPA: National Fire Protection Association (USA)  
 PBT: Persistent, Bioaccumulative and Toxic  
 Pyr. Sol. 1: Pyrophoric Solids, Hazard Category 1  
 Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B  
 Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2  
 Skin Sens. 1: Sensitization - Skin, Hazard Category 1

## **Safety Data Sheet (SDS)**

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 08/04/2015

Reviewed on 09/04/2015

**Trade name: Carbon Steel Electrodes and Rods for Gas Shielded Arc Welding**

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1

vPvB: very Persistent and very Bioaccumulative

Water-react. 1: Substances and Mixtures which, in contact with water, emit flammable gases, Hazard Category 1

Water-react. 2: Substances and Mixtures which, in contact with water, emit flammable gases, Hazard Category 2

***\*All data compared to the previous MSDS version has been altered.***

SDS created by MSDS Authoring Services [www.msdsauthoring.com](http://www.msdsauthoring.com) +1-877-204-9106

**MATERIAL SAFETY DATA SHEET**  
PROJECT 1™ 6000-6500 SERIES SILICONE SEALANT

FILE NO.: 6000  
MSDS DATE: February 21, 2014

**SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME: PROJECT 1™ GENERAL PURPOSE SILICONE ADHESIVE/SEALANT  
PRODUCT CODES: 6001, 6002, 6004, 6005, 6007, 6501, 6502, 6505, 6507

MANUFACTURER: HI-TEC INDUSTRIES  
ADDRESS: 6100 SOUTH FAIRFAX ROAD  
BLOOMINGTON, IN 47401

EMERGENCY PHONE: 800-457-1313  
OTHER CALLS: 812-824-8000  
FAX PHONE: 812-824-8185

CHEMICAL NAME: SILICONE ELASTOMER  
PHYSICAL FORM: PASTE  
ODOR: ACETIC ACID

NFPA PROFILE: HEALTH 2      FLAMMABILITY 1      INSTABILITY/REACTIVITY 0

PREPARED BY: Jerry Ghasstean HI-TEC INDUSTRIES

**SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS**

<u>CAS NO.</u>	<u>% WT</u>	<u>INGREDIENT</u>
64742-46-7	<=26.0	HYDROTREATED MIDDLE PETROLEUM DISTILLATES
4253-34-3	<=2.0	METHYLTRIACTOXYLANE
17689-77-9	<=2.0	ETHYLTRIACTOXYLANE
PMN871176	<=2.0	DIMETHYL SILOXANE, TRIMETHOXY-SILYL-TERMINATED

THE ABOVE COMPONENTS ARE HAZARDOUS AS DEFINED IN 29 CFR 1910.1200

**SECTION 3: HAZARDS IDENTIFICATION**

ROUTES OF ENTRY: EYE, SKIN, INHALATION, INGESTION

POTENTIAL HEALTH EFFECTS

ACUTE EFFECTS

EYES: DIRECT CONTACT MAY CAUSE MODERATE IRRITATION

SKIN: MAY CAUSE MODERATE IRRITATION

INGESTION: MAY CAUSE VOMITING

INHALATION: MATERIAL IS NOT LIKELY TO PRESENT AN INHALATION HAZARD AT AMBIENT CONDITIONS. HOWEVER, IF MATERIAL IS HEATED OR HIGH VAPOR CONCENTRATION IS ATTAINED, CENTRAL NERVOUS SYSTEM DEPRESSION MAY OCCUR, WHICH IS CHARACTERIZED BY DROWSINESS, DIZZINESS, CONFUSION, OR LOSS OF COORDINATION.

PROLONGED/CHRONIC EXPOSURE EFFECTS

SKIN: REPEATED OR PROLONGED CONTACT MAY CAUSE DEFATTING AND DRYING OF SKIN WHICH MAY RESULT IN SKIN IRRITATION AND DERMATITIS.

INHALATION: NO KNOWN APPLICABLE INFORMATION

INGESTION: NO KNOWN APPLICABLE INFORMATION

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: NO KNOWN APPLICABLE INFORMATION

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**SECTION 3 NOTES:** The above listed potential effect of overexposure are based on actual data, results of studies performed upon similar compositions, component data, and /or expert review of the product. Details on relevant toxicology information referenced in Section 9.

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**SECTION 4: FIRST AID MEASURES**

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**EYES:** IMMEDIATELY FLUSH WITH WATER FOR 15 MINUTES. GET MEDICAL ATTENTION

**SKIN:** REMOVE FROM SKIN AND WASH THOROUGHLY WITH SOAP AND WATER OR WATERLESS CLEANER. GET MEDICAL ATTENTION IF IRRITATION OR OTHER ILL EFFECTS DEVELOP OR PERSIST.

**INGESTION:** GET MEDICAL ATTENTION. DO NOT INDUCE VOMITING.

**INHALATION:** MATERIAL IS NOT LIKELY TO PRESENT AN INHALATION HAZARD AT AMBIENT CONDITIONS. IF MATERIAL IS HEATED OR HIGH VAPOR IS GENERATED, CARE SHOULD BE TAKEN TO PREVENT INHALATION. IN CASE OF EXPOSURE TO VAPOR, MOVE TO FRESH AIR.

**NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:** TREAT ACCORDING TO PERSON'S CONDITION AND SPECIFICS OF EXPOSURE.

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**SECTION 5: FIRE-FIGHTING MEASURES**

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**FLAMMABLE LIMITS IN AIR:** NOT DETERMINED

**FLASH POINT:**

F: > 212°

C: >100°

**METHOD USED:** CLOSED CUP

**AUTOIGNITION TEMPERATURE:** NOT DETERMINED

**EXTINGUISHING MEDIA:** ON LARGE FIRES USE DRY CHEMICAL, FOAM, OR WATER SPRAY. ON SMALL FIRES USE CARBON DIOXIDE (CO<sub>2</sub>), DRY CHEMICAL OR WATER SPRAY. WATER CAN BE USED TO COOL FIRE EXPOSED CONTAINERS.

**SPECIAL FIRE FIGHTING PROCEDURES:** SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING SHOULD BE WORN IN FIGHTING LARGE FIRES INVOLVING CHEMICALS. DETERMINE THE NEED TO EVACUATE OR ISOLATE THE AREA ACCORDING TO YOUR LOCAL EMERGENCY PLAN. USE WATER SPRAY TO KEEP FIRE EXPOSED CONTAINERS COOL.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** NONE

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**SECTION 6: ACCIDENTAL RELEASE MEASURES**

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**ACCIDENTAL RELEASE MEASURES:**

OBSERVE ALL PERSONAL PROTECTION EQUIPMENT RECOMMENDATIONS DESCRIBED IN SECTION 5 AND 8. WIPE UP OR SCRAPE UP AND CONTAIN FOR SALVAGE OR DISPOSAL. CLEAN AREA AS APPROPRIATE SINCE SPILLED MATERIALS, EVEN IN SMALL QUANTITIES, MAY PRESENT A SLIP HAZARD. FINAL CLEANING MAY REQUIRE USE OF STEAM, SOLVENTS, OR DETERGENTS. DISPOSE OF SATURATED ABSORBANT OR CLEANING MATERIALS APPROPRIATELY, SINCE SPONTANEOUS HEATING MAY OCCUR. LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS MAY APPLY TO RELEASES AND DISPOSAL OF THIS MATERIAL AS WELL AS THOSE MATERIALS AND ITEMS EMPLOYED IN THE CLEANUP OF RELEASES. YOU WILL NEED TO DETERMINE WHICH FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS ARE APPLICABLE. SECTIONS 13 AND 15 OF THIS MSDS PROVIDE INFORMATION REGARDING CERTAIN FEDERAL AND STATE REQUIREMENTS.

**SECTION 6 NOTES:** SEE SECTION 8 FOR PERSONAL PROTECTIVE EQUIPMENT FOR SPILLS.

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**SECTION 7: HANDLING AND STORAGE**

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**HANDLING AND STORAGE:** USE WITH ADEQUATE VENTILATION. PRODUCT EVOLVES ACETIC ACID (HOAc) WHEN EXPOSED TO WATER OR HUMID AIR. PROVIDE VENTILATION DURING USE TO CONTROL HOAc WITHIN EXPOSURE GUIDELINES OR USE RESPIRATORY PROTECTION. AVOID EYE CONTACT. AVOID SKIN CONTACT. AVOID BREATHING VAPOR, MIST, DUST, OR FUMES. KEEP CONTAINER CLOSED. DO NOT TAKE INTERNALLY.

**OTHER PRECAUTIONS:** USE REASONABLE CARE AND STORE AWAY FROM OXIDIZING MATERIALS. KEEP CONTAINERS CLOSED AND STORE AWAY FROM WATER OR MOISTURE.

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

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**ENGINEERING CONTROLS**

**VENTILATION :** RECOMMENDED

**RESPIRATORY PROTECTION:**

NOT NEEDED UNDER AMBIENT CONDITIONS. IF VAPOR IS GENERATED WHEN MATERIAL IS HEATED OR HANDLED, THE FOLLOWING IS ADVISED: GENERAL AND LOCAL EXHAUST VENTILATION IS RECOMMENDED TO MAINTAIN VAPOR EXPOSURES BELOW RECOMMENDED LIMITS. WHERE CONCENTRATIONS ARE ABOVE RECOMMENDED LIMITS OR ARE UNKNOWN, APPROPRIATE RESPIRATORY PROTECTION SHOULD BE WORN. FOLLOW OSHA RESPIRATOR REGULATIONS (29 CFR 1910.134) AND USE NIOSH/MSHA APPROVED RESPIRATORS.

**EYE PROTECTION:** USE PROPER PROTECTION- SAFETY GLASSES AS A MINIMUM. FOR SPILLS, FULL FACE RESPIRATOR.

**SKIN PROTECTION:** WASH AT MEALTIME AND END OF SHIFT. CONTAMINATED CLOTHING AND SHOES SHOULD BE REMOVED AS SOON AS PRACTICAL AND THOROUGHLY CLEANED BEFORE REUSE. CHEMICAL PROTECTIVE GLOVES RECOMMENDED: BUTYL RUBBER, NEOPRENE RUBBER®, NITRILE RUBBER.

**WORK HYGIENIC PRACTICES:** AVOID EYE CONTACT. AVOID SKIN CONTACT. AVOID BREATHING VAPOR, MIST, DUST, OR FUMES. KEEP CONTAINERS CLOSED. DO NOT TAKE INTERNALLY. USE REASONABLE CARE.

**EXPOSURE GUIDELINES:**

<u>CAS NUMBER</u>	<u>COMPONENT NAME</u>	<u>EXPOSURE LIMITS</u>
64742-46-7	HYDROTREATED MIDDLE PETROLEUM DISTILLATES	OSHA PEL (final rule) AND ACGIH TLV FOR OIL MISTS: TWA 5 mg/m <sup>3</sup>
4253-34-3	METHYLTRIACETOXSILANE	SEE ACETIC ACID COMMENTS
17689-77-9	ETHYLTRIACETOXSILANE	SEE ACETIC ACID COMMENTS

ACETIC ACID IS FORMED UPON CONTACT WITH WATER OR HUMID AIR. PROVIDE ADEQUATE VENTILATION TO CONTROL EXPOSURES WITHIN GUIDELINES OF OSHA PEL: TWA 10 ppm AND ACGIH TLV: TWA 10ppm, STEL 15 ppm.

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

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**ODOR:** VINEGAR-LIKE (ACETIC ACID) SMELL

**PHYSICAL STATE:** PASTE

**pH AS SUPPLIED:** NOT DETERMINED

**BOILING POINT:** > 100°C

**MELTING POINT/FREEZING POINT:** NOT DETERMINED

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VAPOR PRESSURE (mmHg): NOT DETERMINED

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (con't)**

---

VAPOR DENSITY (AIR = 1): NOT DETERMINED

SPECIFIC GRAVITY (H2O = 1): 0.96

SOLUBILITY IN WATER: NOT DETERMINED

VOLATILE ORGANIC COMPOUNDS (VOC): 29g/L

VISCOSITY: 200,000 mPa s

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**SECTION 10: STABILITY AND REACTIVITY**

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CHEMICAL STABILITY: STABLE

INCOMPATIBILITY (MATERIAL TO AVOID):

OXIDIZING MATERIAL CAN CAUSE A REACTION. WATER, MOISTURE, OR HUMID AIRE CAN CAUSE HAZARDOUS VAPORS TO FORM AS DESCRIBED IN SECTION 8.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:

THERMAL BREAKDOWN OF THIS PRODUCT DURING FIRE OR VERY HIGH HEAT CONDITIONS MAY EVOLVE THE FOLLOWING DECOMPOSITION PRODUCTS: CARBON OXIDES AND TRACES OF INCOMPLETELY BURNED CARBON COMPOUNDS, SILICON DIOXIDE, FORMALDEHYDE, METAL OXIDES, SULFUR OXIDES, NITROGEN OXIDES.

HAZARDOUS POLYMERIZATION: HAZARDOUS POLYMERIZATION WILL NOT OCCUR.

CONDITIONS TO AVOID (POLYMERIZATION): NONE

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**SECTION 11: TOXICOLOGICAL INFORMATION**

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TOXICOLOGICAL INFORMATION: NO KNOWN APPLICABLE INFORMATION

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**SECTION 12: ECOLOGICAL INFORMATION**

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**ENVIRONMENTAL FATE AND DISTRIBUTION:** Complete Information Not Available

**ENVIRONMENTAL EFFECTS:** Complete Information is Not Yet Available

**FATE AND EFFECTS IN WASTE WATER TREATMENT PLANTS:** Complete Information is Not Yet Available

Hazard Parameters (LC50 or EC50)	Ecotoxicity Classification Criteria		
	High	Medium	Low
Acute Aquatic Toxicity (mg/L)	<=1	<1 and <=100	>100
Acute Terrestrial Toxicity	<=100	>100 and <=2000	>2000

This table is adapted from "Environmental Toxicology and Risk Assessment". ASTM STP 1179, p.34, 1993

This table can be used to classify the ecotoxicity of this product when ecotoxicity data is listed above. Please read the other information presented in the section concerning the overall ecological safety of this material.

**MATERIAL SAFETY DATA SHEET**  
PROJECT 1™ 6000-6500 SERIES SILICONE SEALANT  
SECTION 13: DISPOSAL CONSIDERATIONS

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RCRA HAZARD CLASS (40 CFR 261)

**SECTION 13: DISPOSAL CONSIDERATIONS (con't)**

SECTION 13 NOTES: When a decision is made to discard this material, as received, is it classified as a hazardous waste? NO  
Check State and Local laws for additional regulatory requirements regarding disposal.

**SECTION 14: TRANSPORT INFORMATION**

**DOT Road Shipment Information (49 CFR 172.101)**

Not subject to DOT

**Ocean Shipment (IMDG)**

Not subject to IMDG code.

**Air Shipment (IATA)**

Not subject to IATA regulations

**SECTION 15: REGULATORY INFORMATION**

**U.S. FEDERAL REGULATIONS**

TSCA (TOXIC SUBSTANCE CONTROL ACT): All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

Section 304 CERCLA Hazardous Substances (40 CFR 302): None

EPA SARA TITLE III: Section 302 Extremely Hazardous Substances (40 CFR 355): None

311/312 HAZARD CLASS (40 CFR 370):

Acute: Yes  
Chronic: No  
Fire: No  
Pressure: No  
Reactive: No

**313 REPORTABLE INGREDIENTS:**

<u>CAS Number</u>	<u>Wt%</u>	<u>Component Name</u>
69991-68-0	<=1.5	Antimony chromium manganese titanium brown rutile

Note: Chemicals are listed under the 313 Toxic Chemicals section only if they meet or exceed a reporting threshold.

**STATE REGULATIONS:**

**CALIFORNIA**

Warning: This product contains the following chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproduction harm. None Known.

**MASSACHUSETTS**

<u>CAS Number</u>	<u>Wt%</u>	<u>Component Name</u>
7631-86-9	<=8.0	Silica, amorphous

# MATERIAL SAFETY DATA SHEET

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1333-86-4	<=2.0	Carbon Black
1309-37-1	<=1.8	Iron oxide
13463-67-7	<=1.6	Titanium dioxide
58-36-6	0.1	10, 10-Oxydiphenoxarsine

## SECTION 15: Continued

### NEW JERSEY

<u>CAS Number</u>	<u>Wt%</u>	<u>Component Name</u>
69991-68-0	<=1.5	Antimony chromium manganese titanium brown rutile
70131-67-8	<=64.0	Dimethyl siloxane, hydroxyl-terminated
64742-46-7	<=26.0	Hydrotreated middle petroleum distillates
7631-86-9	<=8.0	Silica, amorphous
63148-62-9	<=3.0	Polydimethylsiloxane
4253-34-3	<=2.0	Methyltriacetoxysilane
17689-77-9	<=2.0	Ethyltriacetoxysilane
1333-86-4	<=2.0	Carbon Black
PMN871176	<=2.0	Dimethyl siloxane, trimethoxysilyl-terminated
1309-37-1	<=1.8	Iron oxide
13463-67-7	<=1.6	Titanium dioxide
69991-68-0	<=1.5	Antimony chromium manganese titanium brown rutile

### PENNSYLVANIA

<u>CAS Number</u>	<u>Wt%</u>	<u>Component Name</u>
70131-67-8	<=64.0	Dimethyl siloxane, hydroxyl-terminated
64742-46-7	<=26.0	Hydrotreated middle petroleum distillates
7631-86-9	<=8.0	Silica, amorphous
63148-62-9	<=3.0	Polydimethylsiloxane
1333-86-4	<=2.0	Carbon Black
1309-37-1	<=1.8	Iron oxide
13463-67-7	<=1.6	Titanium dioxide
69991-68-0	<=1.5	Antimony chromium manganese titanium brown rutile

## SECTION 16: OTHER INFORMATION

PREPARATION INFORMATION: Prepared by HI-TEC Industries, Inc 812-824-8000

DISCLAIMER:

# MATERIAL SAFETY DATA SHEET

PROJECT 1™ 6000-6500 SERIES SILICONE SEALANT

FILE NO.: 6000

MSDS DATE: February 21, 2014

These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is hereby made.

The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

<http://www.HitecIndustries.com> 812-824-8000

# SAFETY DATA SHEET

F75B401

## Section 1. Identification

**Product name** : KEM® 400 Enamel  
Gloss Black

**Product code** : F75B401

**Other means of identification** : Not available.

**Product type** : Liquid.

**Relevant identified uses of the substance or mixture and uses advised against**  
Not applicable.

**Manufacturer** : THE SHERWIN-WILLIAMS COMPANY  
101 Prospect Avenue N.W.  
Cleveland, OH 44115

**Emergency telephone number of the company** : (216) 566-2917

**Product Information Telephone Number** : Not available.

**Regulatory Information Telephone Number** : (216) 566-2902

**Transportation Emergency Telephone Number** : (800) 424-9300

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : FLAMMABLE LIQUIDS - Category 2  
ACUTE TOXICITY (inhalation) - Category 4  
SKIN CORROSION/IRRITATION - Category 2  
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A  
SKIN SENSITIZATION - Category 1  
CARCINOGENICITY - Category 2  
TOXIC TO REPRODUCTION (Fertility) - Category 2  
TOXIC TO REPRODUCTION (Unborn child) - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2  
ASPIRATION HAZARD - Category 1  
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 17.6%

### GHS label elements

**Hazard pictograms** :



**Signal word** : Danger

## Section 2. Hazards identification

<b>Hazard statements</b>	: Highly flammable liquid and vapor. Harmful if inhaled. Causes serious eye irritation. Causes skin irritation. May cause an allergic skin reaction. Suspected of damaging fertility or the unborn child. Suspected of causing cancer. May be fatal if swallowed and enters airways. May cause respiratory irritation. May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure.
<b><u>Precautionary statements</u></b>	
<b>Prevention</b>	: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.
<b>Response</b>	: Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
<b>Storage</b>	: Store locked up. Store in a well-ventilated place. Keep cool.
<b>Disposal</b>	: Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Supplemental label elements</b>	DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY. Please refer to the SDS for additional information. Do not transfer contents to other containers for storage.
<b>Hazards not otherwise classified</b>	: None known.

## Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	: Mixture
<b>Other means of identification</b>	: Not available.
<b><u>CAS number/other identifiers</u></b>	

## Section 3. Composition/information on ingredients

Ingredient name	% by weight	CAS number
Xylene	≥25 - ≤50	1330-20-7
Lt. Aliphatic Hydrocarbon Solvent	≥10 - ≤25	64742-89-8
Ethylbenzene	≤10	100-41-4
Carbon Black	≤3	1333-86-4
1,2,4-Trimethylbenzene	≤3	95-63-6
Light Aromatic Hydrocarbons	≤3	64742-95-6
Zirconium 2-Ethylhexanoate	≤1	22464-99-9
Methyl Ethyl Ketoxime	≤0.3	96-29-7
Cumene	≤0.3	98-82-8
Cobalt 2-Ethylhexanoate	≤0.3	136-52-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.**

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

## Section 4. First aid measures

### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.
- Specific hazards arising from the chemical** : Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide

## Section 5. Fire-fighting measures

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

## Section 7. Handling and storage

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Xylene	<b>ACGIH TLV (United States, 3/2015).</b> TWA: 100 ppm 8 hours. TWA: 434 mg/m <sup>3</sup> 8 hours. STEL: 150 ppm 15 minutes. STEL: 651 mg/m <sup>3</sup> 15 minutes. <b>OSHA PEL (United States, 2/2013).</b> TWA: 100 ppm 8 hours. TWA: 435 mg/m <sup>3</sup> 8 hours.
Lt. Aliphatic Hydrocarbon Solvent Ethylbenzene	None. <b>ACGIH TLV (United States, 3/2015).</b> TWA: 20 ppm 8 hours. <b>NIOSH REL (United States, 10/2013).</b> TWA: 100 ppm 10 hours. TWA: 435 mg/m <sup>3</sup> 10 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m <sup>3</sup> 15 minutes. <b>OSHA PEL (United States, 2/2013).</b> TWA: 100 ppm 8 hours. TWA: 435 mg/m <sup>3</sup> 8 hours.
Carbon Black	<b>NIOSH REL (United States, 10/2013).</b> TWA: 3.5 mg/m <sup>3</sup> 10 hours. TWA: 0.1 mg of PAHs/cm <sup>3</sup> 10 hours. <b>OSHA PEL (United States, 2/2013).</b> TWA: 3.5 mg/m <sup>3</sup> 8 hours. <b>ACGIH TLV (United States, 3/2015).</b> TWA: 3 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction
1,2,4-Trimethylbenzene	<b>ACGIH TLV (United States, 3/2015).</b> TWA: 25 ppm 8 hours. TWA: 123 mg/m <sup>3</sup> 8 hours. <b>NIOSH REL (United States, 10/2013).</b> TWA: 25 ppm 10 hours. TWA: 125 mg/m <sup>3</sup> 10 hours.
Light Aromatic Hydrocarbons Zirconium 2-Ethylhexanoate	None. <b>ACGIH TLV (United States, 3/2015).</b> TWA: 5 mg/m <sup>3</sup> , (as Zr) 8 hours. STEL: 10 mg/m <sup>3</sup> , (as Zr) 15 minutes. <b>NIOSH REL (United States, 10/2013).</b>

## Section 8. Exposure controls/personal protection

Methyl Ethyl Ketoxime	TWA: 5 mg/m <sup>3</sup> , (as Zr) 10 hours. STEL: 10 mg/m <sup>3</sup> , (as Zr) 15 minutes. <b>OSHA PEL (United States, 2/2013).</b> TWA: 5 mg/m <sup>3</sup> , (as Zr) 8 hours. <b>AIHA WEEL (United States, 10/2011). Skin sensitizer.</b>
Cumene	TWA: 10 ppm 8 hours. <b>ACGIH TLV (United States, 3/2015).</b> TWA: 50 ppm 8 hours. <b>NIOSH REL (United States, 10/2013).</b> <b>Absorbed through skin.</b> TWA: 50 ppm 10 hours. TWA: 245 mg/m <sup>3</sup> 10 hours. <b>OSHA PEL (United States, 2/2013).</b> <b>Absorbed through skin.</b> TWA: 50 ppm 8 hours. TWA: 245 mg/m <sup>3</sup> 8 hours.
Cobalt 2-Ethylhexanoate	<b>ACGIH TLV (United States, 3/2015).</b> TWA: 0.02 mg/m <sup>3</sup> , (as Co) 8 hours.

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

### Skin protection

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

## Section 8. Exposure controls/personal protection

**Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties

### Appearance

**Physical state** : Liquid.  
**Color** : Not available.  
**Odor** : Not available.  
**Odor threshold** : Not available.  
**pH** : Not available.  
**Melting point** : Not available.  
**Boiling point** : 115°C (239°F)  
**Flash point** : Closed cup: 13°C (55.4°F) [Pensky-Martens Closed Cup]  
**Evaporation rate** : 1.5 (butyl acetate = 1)  
**Flammability (solid, gas)** : Not available.  
**Lower and upper explosive (flammable) limits** : Lower: 0.7%  
Upper: 7%  
**Vapor pressure** : 0.21 kPa (1.599 mm Hg) [at 20°C]  
**Vapor density** : 3.66 [Air = 1]  
**Relative density** : 0.93  
**Solubility** : Not available.  
**Partition coefficient: n-octanol/water** : Not available.  
**Auto-ignition temperature** : Not available.  
**Decomposition temperature** : Not available.  
**Viscosity** : Kinematic (room temperature): <0.205 cm<sup>2</sup>/s (<20.5 cSt)  
Kinematic (40°C (104°F)): <0.205 cm<sup>2</sup>/s (<20.5 cSt)  
**Molecular weight** : Not applicable.  
**Aerosol product**  
**Heat of combustion** : 22.5 kJ/g

## Section 10. Stability and reactivity

**Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability** : The product is stable.

**Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

**Incompatible materials** : Reactive or incompatible with the following materials:  
oxidizing materials

## Section 10. Stability and reactivity

**Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
Ethylbenzene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
Carbon Black	LD50 Oral	Rat	>15400 mg/kg	-
1,2,4-Trimethylbenzene	LC50 Inhalation Vapor	Rat	18000 mg/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	5 g/kg	-
Light Aromatic Hydrocarbons	LD50 Oral	Rat	8400 mg/kg	-
Zirconium 2-Ethylhexanoate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	>5 g/kg	-
Methyl Ethyl Ketoxime	LD50 Oral	Rat	930 mg/kg	-
Cumene	LC50 Inhalation Vapor	Rat	39000 mg/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	1400 mg/kg	-
Cobalt 2-Ethylhexanoate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	1.22 g/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
Ethylbenzene	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	100 Percent	-
	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
Light Aromatic Hydrocarbons	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-
	Eyes - Mild irritant	Rabbit	-	24 hours 100 microliters	-
Methyl Ethyl Ketoxime	Eyes - Severe irritant	Rabbit	-	100 microliters	-
Cumene	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	86 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 10 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-

#### Sensitization

Not available.

#### Mutagenicity

Not available.

#### Carcinogenicity

Not available.

# Section 11. Toxicological information

## Classification

Product/ingredient name	OSHA	IARC	NTP
Xylene	-	3	-
Ethylbenzene	-	2B	-
Carbon Black	-	2B	-
Cumene	-	2B	Reasonably anticipated to be a human carcinogen.
Cobalt 2-Ethylhexanoate	-	2B	-

## Reproductive toxicity

Not available.

## Teratogenicity

Not available.

## Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Xylene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Lt. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Ethylbenzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
1,2,4-Trimethylbenzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Light Aromatic Hydrocarbons	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Cumene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

## Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Xylene	Category 2	Not determined	Not determined
Lt. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined
Ethylbenzene	Category 2	Not determined	Not determined
1,2,4-Trimethylbenzene	Category 2	Not determined	Not determined
Light Aromatic Hydrocarbons	Category 2	Not determined	Not determined
Cumene	Category 2	Not determined	Not determined

## Aspiration hazard

Name	Result
Xylene	ASPIRATION HAZARD - Category 1
Lt. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1
Ethylbenzene	ASPIRATION HAZARD - Category 1
1,2,4-Trimethylbenzene	ASPIRATION HAZARD - Category 1
Light Aromatic Hydrocarbons	ASPIRATION HAZARD - Category 1
Cumene	ASPIRATION HAZARD - Category 1

**Information on the likely routes of exposure** : Not available.

**Potential acute health effects**

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

**Symptoms related to the physical, chemical and toxicological characteristics**

- Eye contact** : Adverse symptoms may include the following:
  - pain or irritation
  - watering
  - redness
- Inhalation** : Adverse symptoms may include the following:
  - respiratory tract irritation
  - coughing
  - nausea or vomiting
  - headache
  - drowsiness/fatigue
  - dizziness/vertigo
  - unconsciousness
  - reduced fetal weight
  - increase in fetal deaths
  - skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
  - irritation
  - redness
  - reduced fetal weight
  - increase in fetal deaths
  - skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
  - nausea or vomiting
  - reduced fetal weight
  - increase in fetal deaths
  - skeletal malformations

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Short term exposure**

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

**Long term exposure**

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

**Potential chronic health effects**

Not available.

- General** : May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

- Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : Suspected of damaging the unborn child.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : Suspected of damaging fertility.

**Numerical measures of toxicity**

**Acute toxicity estimates**

Route	ATE value
Oral	7978.5 mg/kg
Inhalation (gases)	11711.3 ppm
Inhalation (vapors)	788.8 mg/l

**Section 12. Ecological information**

**Toxicity**

Product/ingredient name	Result	Species	Exposure
Xylene	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 >100000 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
Lt. Aliphatic Hydrocarbon Solvent	Acute EC50 4600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 3600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
Ethylbenzene	Acute EC50 6530 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 2930 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
1,2,4-Trimethylbenzene	Acute LC50 4200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute LC50 4910 µg/l Marine water	Crustaceans - Elasmopus pecteniscrus - Adult	48 hours
Methyl Ethyl Ketoxime Cumene	Acute LC50 7720 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 843000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute EC50 2600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 7400 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 10600 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 2700 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

**Persistence and degradability**

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Xylene	-	-	Readily
Ethylbenzene	-	-	Readily
Light Aromatic Hydrocarbons	-	-	Readily

**Bioaccumulative potential**

## Section 12. Ecological information

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Xylene	-	8.1 to 25.9	low
Lt. Aliphatic Hydrocarbon Solvent	-	10 to 2500	high
1,2,4-Trimethylbenzene	-	243	low
Light Aromatic Hydrocarbons	-	10 to 2500	high
Zirconium 2-Ethylhexanoate	-	2.96	low
Methyl Ethyl Ketoxime	-	2.5 to 5.8	low
Cumene	-	94.69	low
Cobalt 2-Ethylhexanoate	-	15600	high

### Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) : Not available.

Other adverse effects : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1263	UN1263	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT	PAINT	PAINT
Transport hazard class(es)	3 	3 	3 	3 	3 
Packing group	II	II	II	II	II
Environmental hazards	No.	No.	No.	No.	No.

## Section 14. Transport information

<b>Additional information</b>	<b>Special provisions</b> Not Applicable	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3).	<b>Special provisions</b> Not Applicable	<b>Special provisions</b> Not Applicable	<b>Emergency schedules (EmS)</b> F-E, S-E
	<b>ERG No.</b> 128	<b>Special provisions</b> Not Applicable <b>ERG No.</b> 128	<b>ERG No.</b> 128		<b>Special provisions</b> Not Applicable

**Special precautions for user** : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

**Transport in bulk according to Annex II of MARPOL and the IBC Code** : Not available.

**Proper shipping name** : Not available.  
**Ship type** : Not available.  
**Pollution category** : Not available.

## Section 15. Regulatory information

### SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

### California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		3
Physical hazards		0

The customer is responsible for determining the PPE code for this material.

**Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.**

### Procedure used to derive the classification

## Section 16. Other information

Classification	Justification
FLAMMABLE LIQUIDS - Category 2	On basis of test data
ACUTE TOXICITY (inhalation) - Category 4	Calculation method
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
CARCINOGENICITY - Category 2	Calculation method
TOXIC TO REPRODUCTION (Fertility) - Category 2	Calculation method
TOXIC TO REPRODUCTION (Unborn child) - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
ASPIRATION HAZARD - Category 1	Calculation method

### History

Date of printing	: 3/28/2016
Date of issue/Date of revision	: 3/28/2016
Date of previous issue	: 11/27/2015
Version	: 2
Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations

### Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.





Revision Number: 001.2

Issue date: 10/10/2014

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: OSI Quad Window, Door and Siding VOC Advanced Formula Sealant IDH number: 1642878 - *white*

Product type: SealantSolvent

Restriction of Use: None identified

Company address: Henkel Corporation  
One Henkel Way  
Rocky Hill, Connecticut 06067

Region: United States

Contact information:  
Telephone: +1 (800) 624-7767  
MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711 TRANSPORT EMERGENCY  
Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887

### 2. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

WARNING: CAUSES SKIN IRRITATION.  
CAUSES SERIOUS EYE IRRITATION.

HAZARD CLASS	HAZARD CATEGORY
SKIN IRRITATION	2
EYE IRRITATION	2A

#### PICTOGRAM(S)



#### Precautionary Statements

**Prevention:** Wash thoroughly after handling. Wear eye and face protection. Wear protective gloves.

**Response:** IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. If skin irritation occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing.

**Storage:** Not prescribed

**Disposal:** Not prescribed

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Limestone	1317-65-3	10 - 30
Hydrocarbon resin	Proprietary	10 - 30
p-Chloro-a,a,a-trifluorotoluene	98-56-6	10 - 30
Aliphatic hydrocarbon	Proprietary	5 - 10
Titanium dioxide	13463-67-7	5 - 10

IDH number: 1642878

Product name: OSI Quad Window, Door and Siding VOC Advanced Formula Sealant  
Page 1 of 7

Xylenes	1330-20-7	1 - 5
Silica, amorphous, fumed, crystal-free	112945-52-5	1 - 5
Distillates (petroleum), hydrotreated light	Proprietary	1 - 5
Ethylbenzene	100-41-4	0.1 - 1
Aluminium hydroxide	21645-51-2	0.1 - 1

\* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

#### 4. FIRST AID MEASURES

<b>Inhalation:</b>	If inhaled, immediately remove the affected person to fresh air. If symptoms develop and persist, get medical attention.
<b>Skin contact:</b>	Immediately wash skin thoroughly with soap and water. If symptoms develop and persist, get medical attention.
<b>Eye contact:</b>	In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.
<b>Ingestion:</b>	Get immediate medical attention. Do not induce vomiting. Never give anything by mouth to a victim who is unconscious or is having convulsions.
<b>Symptoms:</b>	See Section 11.
<b>Notes to physician:</b>	Treat symptomatically and supportively.

#### 5. FIRE FIGHTING MEASURES

<b>Extinguishing media:</b>	Water spray (fog), foam, dry chemical or carbon dioxide.
<b>Special firefighting procedures:</b>	Wear a self-contained breathing apparatus with a full face piece operated in pressure-demand or other positive pressure mode. Wear full protective clothing.
<b>Unusual fire or explosion hazards:</b>	May liberate large quantities of dense, foul-smelling smoke which may contain unidentified toxic gasses.
<b>Hazardous combustion products:</b>	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Oxides of nitrogen.

#### 6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

<b>Environmental precautions:</b>	Prevent further leakage or spillage if safe to do so. Wear appropriate protective equipment and clothing during clean-up. Do not allow product to enter sewer or waterways.
<b>Clean-up methods:</b>	Scrape up spilled material and place in a closed container for disposal. Dispose of according to Federal, State and local governmental regulations.

## 7. HANDLING AND STORAGE

**Handling:**

Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Do not breathe fumes or dust from this material. Do not cut, grind, weld, or drill on or near this container. Do not take internally.

**Storage:**

For safe storage, store between 0 °C (32°F) and 40 °C (104°F)  
Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Limestone	10 mg/m <sup>3</sup> TWA Total dust.	5 mg/m <sup>3</sup> PEL Respirable fraction. 15 mg/m <sup>3</sup> PEL Total dust.	None	None
Hydrocarbon resin	None	None	None	None
p-Chloro-a,a,a-trifluorotoluene	None	None	None	None
Aliphatic hydrocarbon	None	None	None	None
Titanium dioxide	10 mg/m <sup>3</sup> TWA	15 mg/m <sup>3</sup> PEL Total dust.	None	None
Xylenes	100 ppm TWA 150 ppm STEL	100 ppm (435 mg/m <sup>3</sup> ) PEL	None	None
Silica, amorphous, fumed, crystal-free	10 mg/m <sup>3</sup> TWA Inhalable dust. 3 mg/m <sup>3</sup> TWA Respirable fraction.	20 MPPCF TWA 0.8 mg/m <sup>3</sup> TWA	None	None
Distillates (petroleum), hydrotreated light	None	None	None	None
Ethylbenzene	20 ppm TWA	100 ppm (435 mg/m <sup>3</sup> ) PEL	None	None
Aluminium hydroxide	10 mg/m <sup>3</sup> TWA (as Al) Total dust. 1 mg/m <sup>3</sup> TWA Respirable fraction.	15 mg/m <sup>3</sup> TWA (as Al) Total dust. 5 mg/m <sup>3</sup> TWA (as Al) Respirable fraction.	None	None

**Engineering controls:**

Ventilation should effectively remove and prevent buildup of any dust generated from the handling of this product.

**Respiratory protection:**

When dusts or thermal processing fumes are generated and ventilation is not sufficient to effectively remove them, appropriate NIOSH/MSHA approved respiratory protection must be provided.

**Eye/face protection:**

Safety goggles or safety glasses with side shields.

**Skin protection:**

Wear impervious gloves for prolonged contact. Use of impervious apron and boots are recommended.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Solid, Paste
Color:	White
Odor:	Aromatic
Odor threshold:	Not available.
pH:	Not applicable
Vapor pressure:	8 mm hg (20 °C (68 °F))
Boiling point/range:	Not available.
Melting point/ range:	Not available.
Specific gravity:	1.3

Vapor density:	Heavier than air
Flash point:	Product is a solid. Burn Rate: <2.2mm/second
Flammable/Explosive limits - lower:	1 %
Flammable/Explosive limits - upper:	7 %
Autoignition temperature:	Not available.
Evaporation rate:	0.7 Slower than butyl acetate.
Solubility in water:	Insoluble
Partition coefficient (n-octanol/water):	Not available.
VOC content:	3.9 %; < 203 g/l
Viscosity:	Not available.
Decomposition temperature:	Not available.

## 10. STABILITY AND REACTIVITY

Stability:	Stable
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Oxides of nitrogen.
Incompatible materials:	This product may react with strong acids or oxidizing agents.
Reactivity:	Not available.
Conditions to avoid:	Keep away from heat, ignition sources and incompatible materials.

## 11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure:	Skin, Inhalation, Eyes
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**Potential Health Effects/Symptoms**

**Inhalation:** Inhalation of dust generated by this material may cause respiratory tract irritation.  
**Skin contact:** This product may cause irritation to the skin.  
**Eye contact:** This product may cause irritation to the eyes. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.  
**Ingestion:** Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Limestone	None	Nuisance dust
Hydrocarbon resin	None	No Records
p-Chloro-a,a,a-trifluorotoluene	None	Adrenals, Blood, Central nervous system, Immune system, Irritant, Kidney, Liver, Lung, Skin, Thyroid
Aliphatic hydrocarbon	None	Irritant, Lung
Titanium dioxide	None	Irritant, Respiratory. Some evidence of carcinogenicity
Xylenes	Oral LD50 (RAT) = 6,670 mg/kg Oral LD50 (RAT) = 3,523 - 8,600 mg/kg Oral LD50 (RAT) = 4,300 mg/kg Dermal LD50 (RABBIT) = > 43 g/kg Inhalation LC50 (RAT, 4 h) = 6,350 mg/l	Cardiac, Central nervous system, Irritant, Kidney, Liver
Silica, amorphous, fumed, crystal-free	None	Nuisance dust
Distillates (petroleum), hydrotreated light	None	Irritant, Lung
Ethylbenzene	Oral LD50 (RAT) = 5.46 g/kg Oral LD50 (RAT) = 3,500 mg/kg Dermal LD50 (RABBIT) = 17,800 mg/kg	Irritant, Central nervous system
Aluminium hydroxide	Oral LD50 (RAT) = > 5,000 mg/kg	Irritant, Lung, Respiratory

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Limestone	No	No	No
Hydrocarbon resin	No	No	No
p-Chloro-a,a,a-trifluorotoluene	No	No	No
Aliphatic hydrocarbon	No	No	No
Titanium dioxide	No	Group 2B	No
Xylenes	No	No	No
Silica, amorphous, fumed, crystal-free	No	No	No
Distillates (petroleum), hydrotreated light	No	No	No
Ethylbenzene	No	Group 2B	No
Aluminium hydroxide	No	No	No

**12. ECOLOGICAL INFORMATION**

**Ecological Information:** Harmful to aquatic organisms.

### 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

**Recommended method of disposal:** Dispose of according to Federal, State and local governmental regulations.

**Hazardous waste number:** Material, if discarded, is not expected to be a characteristic hazardous waste under RCRA. It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

### 14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

#### U.S. Department of Transportation Ground (49 CFR)

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

#### International Air Transportation (ICAO/IATA)

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

#### Water Transportation (IMO/IMDG)

**Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

### 15. REGULATORY INFORMATION

#### United States Regulatory Information

**TSCA 8 (b) Inventory Status:** All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

**TSCA 12 (b) Export Notification:** Chloro-fluoro solvent (CAS# 98-56-6).

**CERCLA/SARA Section 302 EHS:** None above reporting de minimis  
**CERCLA/SARA Section 311/312:** Immediate Health  
**CERCLA/SARA Section 313:** This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Xylenes (CAS# 1330-20-7). Ethylbenzene (CAS# 100-41-4).

**California Proposition 65:** This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. This product contains a chemical known in the State of California to cause cancer.

#### Canada Regulatory Information

**CEPA DSL/NDL Status:** All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

### 16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist

Issue date: 10/10/2014

**DISCLAIMER:** The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.



Revision Number: 001.1

Issue date: 10/13/2014

**1. PRODUCT AND COMPANY IDENTIFICATION**

Product name: OSI Quad Window, Door, and Siding VOC Advanced Formula Sealant IDH number: 1637190 - *Final*  
 Product type: Sealant  
 Restriction of Use: None identified Region: United States  
 Company address: Contact information:  
 Henkel Corporation Telephone: +1 (800) 624-7767  
 One Henkel Way MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711 TRANSPORT EMERGENCY  
 Rocky Hill, Connecticut 06067 Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887

**2. HAZARDS IDENTIFICATION**

EMERGENCY OVERVIEW

WARNING: ABRASION COULD RELEASE RESPIRABLE PARTICLES OF SILICA QUARTZ, A CANCER HAZARD BY INHALATION. NORMAL USE OF THIS PRODUCT CAUSES NO SUCH RELEASE.

CAUSES SKIN IRRITATION.  
 CAUSES SERIOUS EYE IRRITATION.

HAZARD CLASS	HAZARD CATEGORY
SKIN IRRITATION	2
EYE IRRITATION	2A

PICTOGRAM(S)



**Precautionary Statements**

**Prevention:** Wash thoroughly after handling. Wear eye and face protection. Wear protective gloves.  
**Response:** IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. If skin irritation occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing.  
**Storage:** Not prescribed  
**Disposal:** Not prescribed

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

IDH number: 1637190

Product name: OSI Quad Window, Door, and Siding VOC Advanced Formula Sealant  
 Page 1 of 7

Hazardous Component(s)	CAS Number	Percentage*
Limestone	1317-65-3	30 - 60
Hydrocarbon resin	Proprietary	10 - 30
4-Chloro-.alpha.,.alpha.,.alpha.-trifluorotoluene	98-56-6	10 - 30
Aliphatic hydrocarbon	Proprietary	10 - 30
Silica, amorphous, fumed, crystal-free	112945-52-5	1 - 5
Xylenes	1330-20-7	1 - 5
Ethylbenzene	100-41-4	0.1 - 1
Quartz (SiO <sub>2</sub> )	14808-60-7	0.1 - 1

\* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

#### 4. FIRST AID MEASURES

<b>Inhalation:</b>	If inhaled, immediately remove the affected person to fresh air. If breathing is difficult, give oxygen. If symptoms develop and persist, get medical attention.
<b>Skin contact:</b>	Immediately wash skin thoroughly with soap and water. If symptoms develop and persist, get medical attention.
<b>Eye contact:</b>	In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.
<b>Ingestion:</b>	Do not induce vomiting, seek medical advice immediately.
<b>Symptoms:</b>	See Section 11.
<b>Notes to physician:</b>	Treat symptomatically and supportively.

#### 5. FIRE FIGHTING MEASURES

<b>Extinguishing media:</b>	Water spray (fog), foam, dry chemical or carbon dioxide.
<b>Special firefighting procedures:</b>	Wear a self-contained breathing apparatus with a full face piece operated in pressure-demand or other positive pressure mode. Wear full protective clothing.
<b>Unusual fire or explosion hazards:</b>	Closed containers may explode when exposed to extreme heat. Fumes and vapors from thermal decompositions vary in composition and toxicity.
<b>Hazardous combustion products:</b>	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

#### 6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

<b>Environmental precautions:</b>	Ventilate area. Wear appropriate protective equipment and clothing during clean-up. Prevent further leakage or spillage if safe to do so. Do not allow product to enter sewer or waterways.
<b>Clean-up methods:</b>	Scrape up spilled material and place in a closed container for disposal. Dispose of according to Federal, State and local governmental regulations.

## 7. HANDLING AND STORAGE

**Handling:**

Do not pressurize, cut, heat or weld containers. Empty product containers may contain product residue. Do not reuse empty containers. Use only in well-ventilated areas. Keep out of the reach of children.

**Storage:**

For safe storage, store between 0 °C (32°F) and 40 °C (104°F) Keep in a cool, well ventilated area.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Limestone	10 mg/m <sup>3</sup> TWA Total dust.	5 mg/m <sup>3</sup> PEL Respirable fraction. 15 mg/m <sup>3</sup> PEL Total dust.	None	None
Hydrocarbon resin	None	None	None	None
4-Chloro-.alpha.,.alpha.,.alpha.-trifluorotoluene	None	None	None	None
Aliphatic hydrocarbon	None	None	None	None
Silica, amorphous, fumed, crystal-free	10 mg/m <sup>3</sup> TWA Inhalable dust. 3 mg/m <sup>3</sup> TWA Respirable fraction.	20 MPPCF TWA 0.8 mg/m <sup>3</sup> TWA	None	None
Xylenes	100 ppm TWA 150 ppm STEL	100 ppm (435 mg/m <sup>3</sup> ) PEL	None	None
Ethylbenzene	20 ppm TWA	100 ppm (435 mg/m <sup>3</sup> ) PEL	None	None
Quartz (SiO <sub>2</sub> )	0.025 mg/m <sup>3</sup> TWA Respirable fraction.	2.4 MPPCF TWA Respirable. 0.1 mg/m <sup>3</sup> TWA Respirable. 0.3 mg/m <sup>3</sup> TWA Total dust.	None	None

**Engineering controls:**

Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.

**Respiratory protection:**

Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists. When workplace hazards warrant the use of a respirator, appropriate respirators must be used, and a program that follows 29 CFR 1910.134 must be followed.

**Eye/face protection:**

Safety goggles or safety glasses with side shields.

**Skin protection:**

Use impermeable gloves and protective clothing as necessary to prevent skin contact.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical state:**

Solid, Paste

**Color:**

Various

**Odor:**

Aromatic

**Odor threshold:**

Not available.

**pH:**

Not applicable

**Vapor pressure:**

8 mm hg (20 °C (68°F))

**Boiling point/range:**

Not available.

**Melting point/ range:**

Not available.

Specific gravity:	1.3
Vapor density:	Heavier than air
Flash point:	Product is a solid. Burn Rate: <2.2mm/second
Flammable/Explosive limits - lower:	1 %
Flammable/Explosive limits - upper:	7 %
Autoignition temperature:	Not available.
Evaporation rate:	0.7 Slower than butyl acetate.
Solubility in water:	Insoluble
Partition coefficient (n-octanol/water):	Not available.
VOC content:	1.49 %; 194 g/l (calculated)
Viscosity:	Not available.
Decomposition temperature:	Not available.

## 10. STABILITY AND REACTIVITY

Stability:	Stable
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Incompatible materials:	Strong oxidizing agents.
Reactivity:	Not available.
Conditions to avoid:	Keep away from heat, ignition sources and incompatible materials.

## 11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure:	Inhalation, Skin contact
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**Potential Health Effects/Symptoms**

**Inhalation:** Irritates the nose, throat and respiratory system. Exposure to high doses may cause central nervous system depression. Such doses may also cause adverse effects in the liver, kidneys, and lungs. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

**Skin contact:** Prolonged and/or repeated skin contact with this product may cause irritation/dermatitis.

**Eye contact:** Contact with eyes can cause eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

**Ingestion:** Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Limestone	None	Nuisance dust
Hydrocarbon resin	None	No Records
4-Chloro-.alpha.,.alpha.,.alpha.-trifluorotoluene	None	Adrenals, Blood, Central nervous system, Immune system, Irritant, Kidney, Liver, Lung, Skin, Thyroid
Aliphatic hydrocarbon	None	Irritant, Lung
Silica, amorphous, fumed, crystal-free	None	Nuisance dust
Xylenes	Oral LD50 (RAT) = 6,670 mg/kg Oral LD50 (RAT) = 3,523 - 8,600 mg/kg Oral LD50 (RAT) = 4,300 mg/kg Dermal LD50 (RABBIT) = > 43 g/kg Inhalation LC50 (RAT, 4 h) = 6,350 mg/l	Cardiac, Central nervous system, Irritant, Kidney, Liver
Ethylbenzene	Oral LD50 (RAT) = 5.46 g/kg Oral LD50 (RAT) = 3,500 mg/kg Dermal LD50 (RABBIT) = 17,800 mg/kg	Irritant, Central nervous system
Quartz (SiO2)	None	Immune system, Lung, Some evidence of carcinogenicity

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Limestone	No	No	No
Hydrocarbon resin	No	No	No
4-Chloro-.alpha.,.alpha.,.alpha.-trifluorotoluene	No	No	No
Aliphatic hydrocarbon	No	No	No
Silica, amorphous, fumed, crystal-free	No	No	No
Xylenes	No	Group 2B	No
Ethylbenzene	Known To Be Human Carcinogen.	Group 1	No
Quartz (SiO2)	Known To Be Human Carcinogen.	Group 1	No

**12. ECOLOGICAL INFORMATION**

**Ecological information:** Harmful to aquatic organisms.

### 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

- Recommended method of disposal:** Dispose of according to Federal, State and local governmental regulations.
- Hazardous waste number:** It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

### 14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

#### U.S. Department of Transportation Ground (49 CFR)

- Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

#### International Air Transportation (ICAO/IATA)

- Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

#### Water Transportation (IMO/IMDG)

- Proper shipping name:** Not regulated  
**Hazard class or division:** None  
**Identification number:** None  
**Packing group:** None

### 15. REGULATORY INFORMATION

#### United States Regulatory Information

- TSCA 8 (b) Inventory Status:** All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
- TSCA 12 (b) Export Notification:** Chloro-fluoro solvent (CAS# 98-56-6).
- CERCLA/SARA Section 302 EHS:** None above reporting de minimis  
**CERCLA/SARA Section 311/312:** Immediate Health, Delayed Health  
**CERCLA/SARA Section 313:** This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Xylenes (CAS# 1330-20-7). Ethylbenzene (CAS# 100-41-4).
- California Proposition 65:** This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. This product contains a chemical known in the State of California to cause cancer.

#### Canada Regulatory Information

- CEPA DSL/NDL Status:** All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

### 16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist

Issue date: 10/13/2014

**DISCLAIMER:** The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

**Appendix B  
Equipment Specifications**





## THE ECONOMICAL ALTERNATIVE FOR HARD-TO-HEAT SPACES:

- Residential Garages
- Vestibules
- Entryways
- Greenhouses
- Enclosed Patios
- Solariums
- Workshops
- Swimming Pools
- Farm Buildings
- Clubhouses
- Small Businesses
- Auto Garages
- Warehouses
- Print Shops
- Machine Shops
- Small Manufacturing  
Facilities

HEATS UP TO 5,000 SQ. FT.



Whether you need to heat your garage, workshop, or other hard-to-heat spaces, the SunStar Eclipse infrared heater provides both the fuel efficiency of radiant heat and the installation flexibility you need . . . and all at a comfortable price.

### INTRODUCING

# The SunStar Eclipse™

RADIANT WARMTH AT A COMFORTABLE PRICE.

## COMPACT INFRARED GAS TUBE HEATER

Utilizing a heavy-duty heat exchanger, the new SunStar Eclipse infrared tube heater provides an efficient source of radiant heat for a wide variety of hard-to-heat spaces.

## THE POWER OF RADIANT HEAT

Using the power of radiant heat, the new SunStar Eclipse infrared tube heater puts the warmth of the sun inside your building, and it reduces your fuel bills up to 50%! Its radiant heat warms people, concrete floors and objects. The heat is absorbed and re-radiated to warm the entire area through convection. This, combined with the fact that it is powered by gas, adds up to one unbeatable combination. So, consider a very warm and efficient alternative to competitive heaters just blowing hot air. Consider the new SunStar Eclipse infrared tube heater.

## GENERAL FEATURES

- Available in Btu sizes from 25,000 to 45,000
- Compact size - overall length is 9'2" for ease of installation
- Efficiencies range up to 84.5%
- Models for both natural and propane gas
- Installation as low as 8' above floor
- Optional deflector kit for reduced clearances below
- CSA Design Certified

## TECHNICAL FEATURES

**Vacuum System** - Products of combustion are pulled through the combustion chamber for greater safety . . . virtually eliminates the possibility of combustion gases leaking into the heated space.

**Solid State Ignition System** - Reliable electronic direct spark ignition system with 100% gas safety shut-off control and 30-second prepurge . . . safety and efficiency assurance.

**U-Tube Design** - Provides uniform emitter tube temperatures and energy distribution on the floor . . . unlike straight tube heaters which are always hotter at the burner end than at the exhaust end.

**Warranty** - 5-year limited combustion chamber warranty.

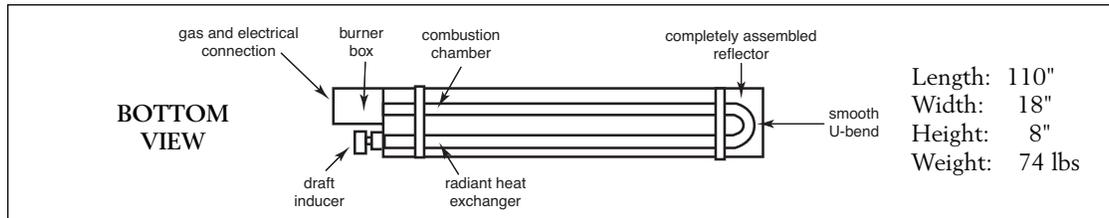
**Other Features** - Heavy-duty combustion chamber, aluminum reflectors with 97% reflectivity rating, diaphragm safety switch for proof of venting, and system indicator lights.

## TECHNICAL SPECIFICATIONS

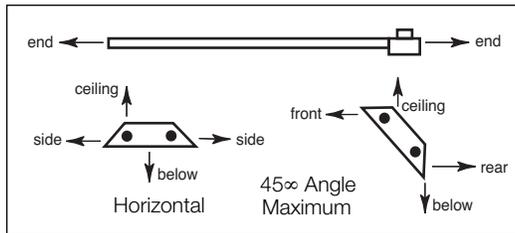
Model Number	Input BTU/Hour	Model Number	Input BTU/Hour	Type Gas	Burner Pressure	Supply Pressure
SIR25	25,000	SIR 45	45,000	Natural	3.5" WC	5" WC min - 14" WC max
SIR35	35,000			Propane	10" WC	11" WC min - 14" WC max

Electrical Requirements: 120 VAC, 60 HZ, 2.4 amps. Flue connection: 4" round. Optional outside combustion air connection: 4" round.

## DIMENSIONS



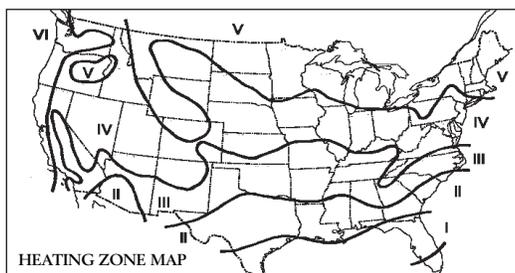
## MINIMUM CLEARANCES TO COMBUSTIBLES



Model	Mounting Angle	Side Front	Side Rear	Ceiling	Below	Ends
SIR(25)	0°	8"	8"	4"	41"	12"
SIR(25)	45°	30"	4"	4"	41"	12"
SIR(35)(45)	0°	12"	12"	4"	57"	12"
SIR(35)(45)	45°	40"	4"	4"	57"	12"
		*33" with deflector	**42" with deflector			

Maintain the listed clearances below to vehicles parked under the heater at all times.

## MODEL SELECTION GUIDELINES



Properly selected heaters will provide the most efficient operation for your installation.

The models recommended are selected for a 22' x 28' two-car or a 26' x 32' three-car insulated garage. Select the model number corresponding to the geographic location in which the heater will be installed. Model size is determined by garage heat loss. Please consult your SunStar distributor to determine the heat loss for your particular application.

Zone	Model
I and II	SIR 25
III and VI	SIR 35
IV and V	SIR 45

For your safety, operate SunStar Eclipse infrared heaters with proper care and observe all safety precautions. Carefully follow the printed installation, operating and cleaning instructions. Installation and service must be performed by a licensed contractor and conform with local codes. Adequate ventilation always must be provided in accordance with codes. Do not store gasoline or combustible products in the vicinity of the heater. Keep children, clothes, and draperies a way from the heater. Do not touch the heater or tubes while the heater is in operation.

**We Make Winters Warmer**  
**SunStar Heating Products, Inc.**

306 West Tremont Avenue  
P.O. Box 36271  
Charlotte, North Carolina 28236  
Telephone (Toll Free): 1(888)778-6782  
Telephone (704) 372-3486  
Fax: (704) 332-5843  
Email: info@sunstarheaters.com  
www.sunstarheaters.com

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member



# FINISHING CONSULTANTS

A DIVISION OF MANUFACTURERS' AGENTS NORTHWEST, INC.  
720 132nd STREET SW, SUITE 201  
EVERETT, WASHINGTON 98204  
TOLL FREE: 1.800.514.0095  
www.finishingconsultants.com

## No Charge Change SALES CONFIRMATION

May 24, 2016

Ryan Casper  
TrailersPlus / Interstate Group LLC  
3800 Airport Rd.  
Nampa, ID 83687

Dear Ryan,

Please see below Highlighted parts are what have changed per MFG Approval Drawings:

### Item 1: **SPECIAL, NON-PRESSURIZED, TRUCK/EQUIPMENT DRY FILTER CROSSFLOW PAINT SPRAY BOOTH**

#### Subject Model

GFS Model #CDG-1412NDT-50-BB-XB-S

Working Dimensions: 14'0" Wide x 12'0" High x 50'0" Deep

Approx. Overall Dimensions: 15'4" Wide x 14'2" High x 50'4" Deep

(Overall dimensions subject to change at time of approval drawing)

#### Exhaust System

1 ea. 34" Tube axial in-line exhaust fan (16,800 Total CFM @ 1/2" s.p.)

Tube axial fans feature a continuously welded housing for an airtight seal. The propellers are non-sparking cast aluminum for consistent air velocity at higher static pressures. The universal motor plates will allow adjustable belt tensioning. The bearings are of premium air handling quality, self-aligning, and have an L<sub>10</sub> life of 40,000 hours. The belt guard provides protection from the rotating pulley (OSHA

#### Product Entry Door

1 set Filtered, Bi-Fold product entry door with 20" x 20" x 2" filter cells (10' wide x 12' high).

Doors are 2" tube framed and single skinned with 18 ga. sheet steel for sturdiness and durability. Door hinges are heavy duty for long-lasting performance. A seal is created with a durable P-Seal rubber gasket.

1 set 20" x 20" x 1" Tackified Intake filters with internal wire grids

---

"EXPERT TECHNICAL SERVICES - EFFICIENT EQUIPMENT SOLUTIONS"

### Lighting

**25 ea. Fluorescent light fixtures, inside access 48" 4-tube, 265 mA, 32-watt T8 ballast, dual voltage-120/277 with 85% color corrected tubes included.**

Lights are Class I, Division 2 rated. Lights are ETL & ETL-C listed and are also listed for locations having deposits of readily combustible paint residue. Instant start (starting temperature at 0 degrees F.) T-8 electronic ballast provides greater energy savings. The lamp holders are twist in style. The lights feature front/inside access for easy lamp replacement and are equipped with an interlock switch to disable painting operations when light access door is opened.

### Product Entry Door

**1 set Filtered, Bi-Fold product entry door with 20" x 20" x 2" filter cells (10' wide x 10' high).**

Doors are 2" tube framed and single skinned with 18 ga. sheet steel for sturdiness and durability. Door hinges are heavy duty for long lasting performance. A seal is created with a durable P-Seal rubber gasket.

1 set 20" x 20" x 1" Tackified Intake filters with internal wire grids

### Product Exit Door

**1 set Solid, Bi-Fold product exit door (10' wide x 12' high).**

Doors are 2" tube framed and single skinned with 18 ga. sheet steel for sturdiness and durability. Door hinges are heavy duty for long lasting performance. A seal is created with a durable P-Seal rubber gasket.

### Personnel Door

2 ea. Personnel access doors with panic latch (3'0"W x 7'0"H) with 18" x 24" clear tempered glass observation window

### Exhaust Chamber

1 ea. **Bridge Internal** exhaust filter chamber with 20" x 20" x 2" filter cells

1 set 20" x 20" x 2" Polyester Exhaust filters and 1 set of wire grids & tips

### Control Panel

**1 ea. Pre-wired independent electrical control panel (480v, 3ph, 3 wire) featuring single point power connection for quick and easy wiring to the line side of the main disconnecting device with NEMA-12 rated enclosure. Includes:**

- Main breaker disconnect
- Magnetic motor starter
- Motor fuse protection
- Lighting contactor
- Lighting fuse protection
- Terminal strips for field wiring
- System operating lights
- Air make-up temp select
- UL industrial listing

### **Air Balancing System**

#### **1 ea. Consta-Flow System (Model # CF-5-1)**

Designed to automatically adjust the exhaust fan to the changing conditions of the exhaust filters. This system is recommended by GFS on all paint booths with conveyor openings and/or booths with multiple filter stages that have high static pressure when loading. This system consists of a variable frequency drive that controls the exhaust fan motor, differential pressure gauge and sensing probes. The system monitors the static pressure and will adjust the exhaust fans RPM's to what is needed for the volume of exhaust air based on how loaded the filter are. The result is a booth with constant airflow as the filters load up with paint and will increase useful filter life.

### **Exhaust Ductwork**

#### **1 lot 34" dia. Exhaust ductwork for a 20 ft. high Pitched roof (3/12) to include:**

- 1 ea. 8' sections of spiral duct with connecting rings on both ends
- 1 ea. 4' sections of spiral duct with inspection door and connecting rings on both ends
- 1 ea. Pitched roof flange
- 1 ea. Automatic roof ventilator
- 1 ea. Guy wire kit

**NOTE: Duct supports not provided in this quotation.**

### **Operational and Safety Equipment**

- 1 ea. 1/2" 3-way solenoid valve to prevent spraying in booth when fans are off or light tube access door is opened (NFPA-33 requirement)
- 1 ea. Dwyer Mark II Manometer (Required per NFPA-33 Fire Code to monitor paint over spray build up on exhaust filters)

### **Assembly Hardware**

- 1 lot Necessary assembly hardware including all required bolts, nuts, & caulking for a complete mechanical assembly. (Note: Anchor bolts by others unless specified)
- 1 set Exploded view installation drawings for easy assembly

**Total Price F.O.B. Osseo, Wisconsin \$33,810.00**





**Item 2:**

**Titan Air 17,500 CFM Air Make Up Unit  
Model # TA-122 NG VRH**

CFM:	<u>17,500</u>	ESP:	<u>0.15" wc</u>	Temperature Rise (°F):	<u>100</u>
BTU/Hr:	Min. <u>77,000</u>	Max.	<u>1,925,000</u>		
Heat Medium:	<u>Direct-Fired NG: 1# - 5# Inlet Pressure @ 1,925 CFH, STD-ANSI Gas Train</u>				
Cool Medium:	<u>None</u>				
Function:	<u>Air Make-Up Unit</u>				<u>Outdoor Mounted</u>
Voltage:	<u>460 V, 3ph., 60 Hz.</u>	Motor HP:	<u>15</u>	NEC FLA:	<u>21</u>
				Unit FLA:	<u>22</u>
Heating Temp. Control	<u>Discharge Control (RTC DFC)</u>				

**OPTIONAL EQUIPMENT INCLUDED:**

- Outside Air Filter Section  
Type: 2 in. Pleated, MERV 8
- Discharge Damper & Actuator\*
- Discharge Diffuser\*  
Type: 3-Way
- 4' Discharge Duct (Uninsulated)\*
- 45° Discharge Elbow (Uninsulated)\*
- Insulated Unit (Conditioned Airstream)
- G-90 Galvanized Casing & Accessories

**OPTIONAL CONTROLS INCLUDED:**

- 1750 rpm ODP Premium Efficiency Motor
- Low Fire Start
- High Gas Pressure Switch
- Door Interlocked Non-Fused Unit Disconnect
- Interrupted Ignition
- ETL Label (ANSI Z83.4/CSA 3.7)

Delivery: 6-8 weeks after receipt of PO, Deposit and Signed Approval Drawings

**EXCEPTIONS AND EXCLUSIONS:** Third-party inspections or certifications, fire suppression systems, compressed air piping or regulators, rental equipment, electrical connection to power source, any permits or permit costs, membrane-roof work or services to comply with roof warranty, Air Quality permits or costs, any other required permits or costs not described above, gas meter upgrades are the responsibility of the Gas Service Provider account holder, building alarm or fire system wiring or interlocks, site engineering, building or roof modifications to meet permit and building department requirements, any additional offsets in ducting if required, concrete work, freight charges, sales tax, travel expenses, off-loading of equipment and storage, or any items not specifically listed in our quotation.

**TERMS AND CONDITIONS:**

Buyer agrees to the terms & conditions attached as Exhibit "A" and incorporated by reference herein.

**Accepted:**

**Buyer: Ryan Casper, TrailersPlus/Interstate**

By: \_\_\_\_\_  
Signature Please Print  
Title: \_\_\_\_\_ Date: \_\_\_\_\_

Seller: Finishing Consultants, division of Manufacturers Agents Northwest, Inc.

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Jeffrey P. LaSorella, President



# UNIT SPECIFICATIONS

Title: Trailers Plus

Sales Rep.: Finishing Consultants

Q/N: 58038-2

S/N: 16281

Model: TA - 122 NG VRH

Date: 5/20/16

CFM:	17,500	ESP:	0.15" wc	Temperature Rise (°F):	100		
BTU/Hr:	Min. 77,000		Max. 1,925,000				
Heat Medium:	Direct-Fired NG: 1# - 5# Inlet Pressure @ 1,925 CFH, STD-ANSI Gas Train						
Cool Medium:	None						
Function:	Air Make-Up Unit			Outdoor Mounted			
Voltage:	460 V, 3ph., 60 Hz.	Motor HP:	15	NEC FLA:	21	Unit FLA:	22
Heating Temp. Control	Discharge Control (RTC DFC)						

#### OPTIONAL EQUIPMENT INCLUDED:

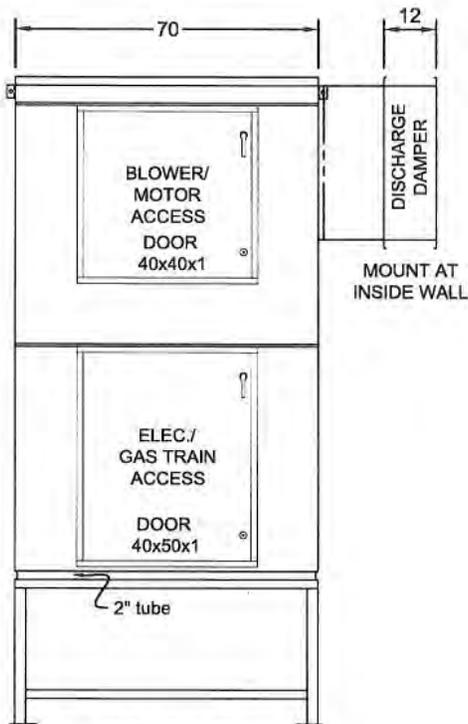
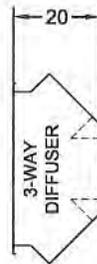
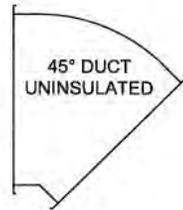
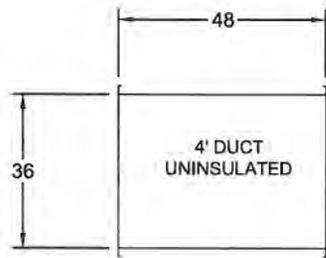
- Outside Air Filter Section  
Type: 2 in. Pleated, MERV 8
- Discharge Damper & Actuator\*
- Discharge Diffuser\*  
Type: 3-Way
- 4' Discharge Duct (Uninsulated)\*
- 45° Discharge Elbow (Uninsulated)\*
- Insulated Unit (Conditioned Airstream)
- G-90 Galvanized Casing & Accessories

#### OPTIONAL CONTROLS INCLUDED:

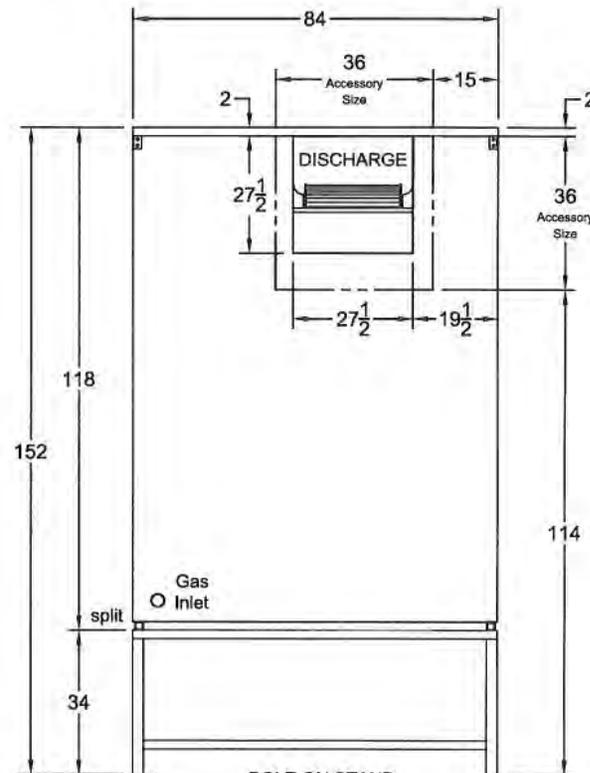
- 1750 rpm ODP Premium Efficiency Motor
- Low Fire Start
- High Gas Pressure Switch
- Door Interlocked Non-Fused Unit Disconnect
- Interrupted Ignition
- ETL Label (ANSI Z83.4/CSA 3.7)

SUBMITTAL USE ONLY. NOT FOR CONSTRUCTION, INSTALLATION, OR SERVICE USE.

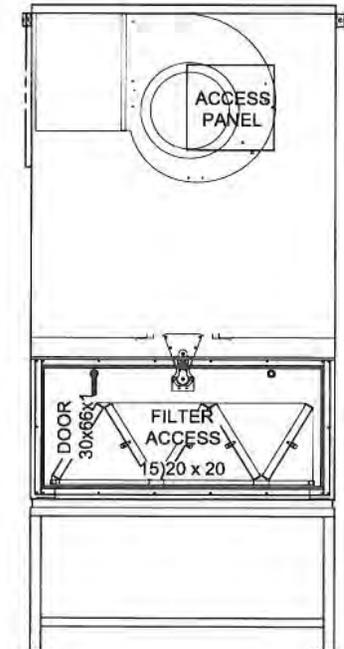
\* Denotes items shipped loose for field installation. See catalog or submittal for standard items.



SERVICE SIDE



BOLT ON STAND



- ACCESSORIES ARE LARGER THAN OPENINGS & SUPPORTED BY OTHERS
- MUST SHIP DROP DECK



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CONSENT OF TITAN AIR INCORPORATED.

QUOTE NUMBER:  
58038-2  
SERIAL NUMBER:  
SN-16281

DRAWING NAME:  
DESCRIPTION:  
TA-122 VRH AMU  
CUSTOMER

JOB NAME:  
TRAILERS PLUS  
REP. NAME:  
FINISHING CONSULTANTS

DRAWN BY:  
CHAD BRAATEN  
DRAWN DATE:  
5/20/16

SCALE:  
NTS  
DRAWING NUMBER:  
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SHEET #:  
1 OF 1  
ISSUE #:  
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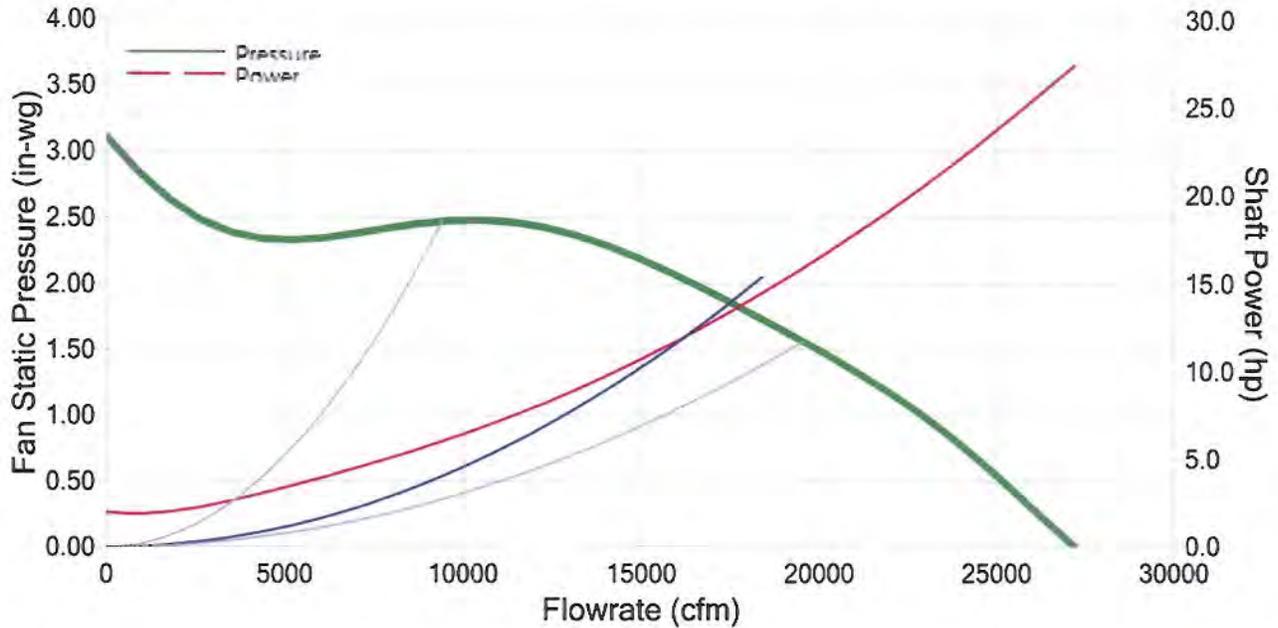


Job Name

Submitted by/notes

Model <b>MODEL A22-22H</b>	Flow 17500 CFM	Pressure (Ps) 1.86 in-wg	Temperature 70 °F	Altitude 0 ft	Density 0.075 lb/ft <sup>3</sup>	Q Derate 0 cfm	P Derate 0.00 in-wg	VAV Set Point 0.00 in-wg	Date 05-20-2016
Fan Tag	Flow 17500 CFM	Pressure (Ps) 1.86 in-wg	Power 13.42 hp	Static Efficiency 38.2 %	Total Efficiency 53.3 %	Speed 691 rpm	Outlet Velocity 3431 fpm	Efficiency Rating FEG71	
	Impeller Dia 22.4 in	Outlet Area 5.10 ft <sup>2</sup>	Max Speed 930 rpm	AMCA Class I	Drive Belt Drive	Blades 37	P Volume 34.1 ft <sup>3</sup>	Turndown 100 %	

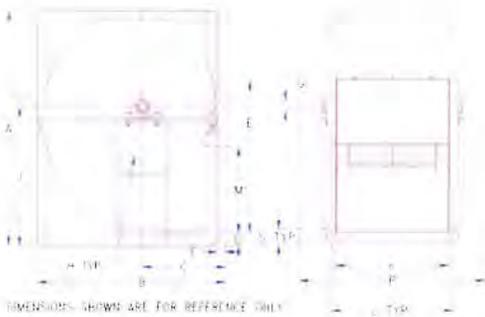
**Performance**



Sound (Lwi)	63	125	250	500	1000	2000	4000	8000	Lw	LwA
	94	93	90	89	85	82	79	73	98	92

**Options**

Available Bores: 1-3/16, 1-7/16, 1-11/16, 1-15/16, 2-1/4, 2-3/16, 2-7/16, 2-11/16, 2-15/16, 3, 4, 4-1/2 and 5 inch  
Wheels available separately



DIMENSIONS SHOWN ARE FOR REFERENCE ONLY

A	B	C	E	F	G	H	J	K	L	M	P	S	U
41.50	35.75	15.69	27.25	1.50	1.44	18.06	24.59	27.25	28.75	16.75	39.75	2.50	2.00

Dimensions in inches



Lau Industries, Inc. certifies that the H Series BD shown herein is licensed to bear the AMCA Seal. The ratings shown are based on the test and procedures performed in accordance with AMCA publication 211 and comply with the requirements of the AMCA certified ratings program.

Performance is certified for the installation B Free Inlet, Ducted Outlet. Performance ratings do not include the effects of appurtenances (accessories).

Power ratings (hp) do not include transmission losses.

The AMCA Certified Ratings Seal applies to air performance only



# STATIC PRESSURE DROPS

CFM	17500	STATIC
ESP		0.15
Unit	TA - 122 NG VRH	0.98
Hood		0
O.A. Filter(s)	1" Cleanable	0
	2" Cleanable	0
	MG300 Linked Panel MERV 8 (2" Rack)	0
	2" Pleated MERV 8	0.38
	PR Linked Panel MERV 7 (2" Rack)	0
	Other	0
Intake Damper		0
Discharge Damper		0.18
Discharge Diffuser	3-Way	0.17
Misc. Static Drop		0
		0
<b>TOTAL STATIC</b>	17500	<b>1.86</b>
R.A. Filters	1" Cleanable	
	2" Cleanable	
	2" Throw Away	
	2" Pleated 30% Efficient	
	Linked Panel (1" Rack)	
	Other	



## SEQUENCE OF OPERATION

### **AIR MAKE-UP UNIT WITH RTC SOLUTIONS DISCHARGE TEMPERATURE CONTROL**

#### **SUMMER MODE:**

1. Summer/Off/Winter (S.O.W.) switch in summer position.
2. Damper (optional discharge or intake) will open.
3. Damper interlock switch closes, energizing supply fan motor starter.

#### **WINTER MODE:**

1. S.O.W. switch in winter position.
2. Damper (optional intake or discharge) will open.
3. Damper interlock switch closes, energizing supply fan motor starter.
4. Low temperature safety LTS-1 (optional) will shut unit down after 3 minutes of operation with discharge air temperature below its set point.
5. ST-1 contact closes supplying power to burner enabling circuit.
6. Air flow switch (P-1) makes when pressure drop across burner profile is sensed.
7. Air flow switch (P-1A) will open if air flow goes above design parameters.
8. Inlet duct-stat (T-1) (optional) makes at outside temperatures below its set point.
9. High temperature limit (TL-1) is a normally closed safety switch and will trip when discharge temperatures exceed its set point (this is a manual reset switch).
10. High (P-3) and low (P-2) gas pressure switches (optional) (P-3 will be installed on all units with stated supply gas pressure of 14" w.c. or higher) to protect against abnormal gas pressure and are manual reset safety switches.
11. Pre-purge (built into FS-1) clears cabinet of combustible gases before ignition.
12. Flame safeguard relay (FS-1) monitors ignition and burn process. If abnormal conditions exist, control will shut down unit. FS-1 is a manual reset control.
13. Discharge temperature is regulated by a sensor (TS-1) in the discharge of the unit and selected at a remote point (TD-1).
14. When unit is shut off there is a fifteen second post purge. The blower will operate for fifteen seconds after S.O.W switch is placed in the off position.

In all modes, exhaust fans interlocked with unit or building relief must be provided by others to ensure proper ventilation.

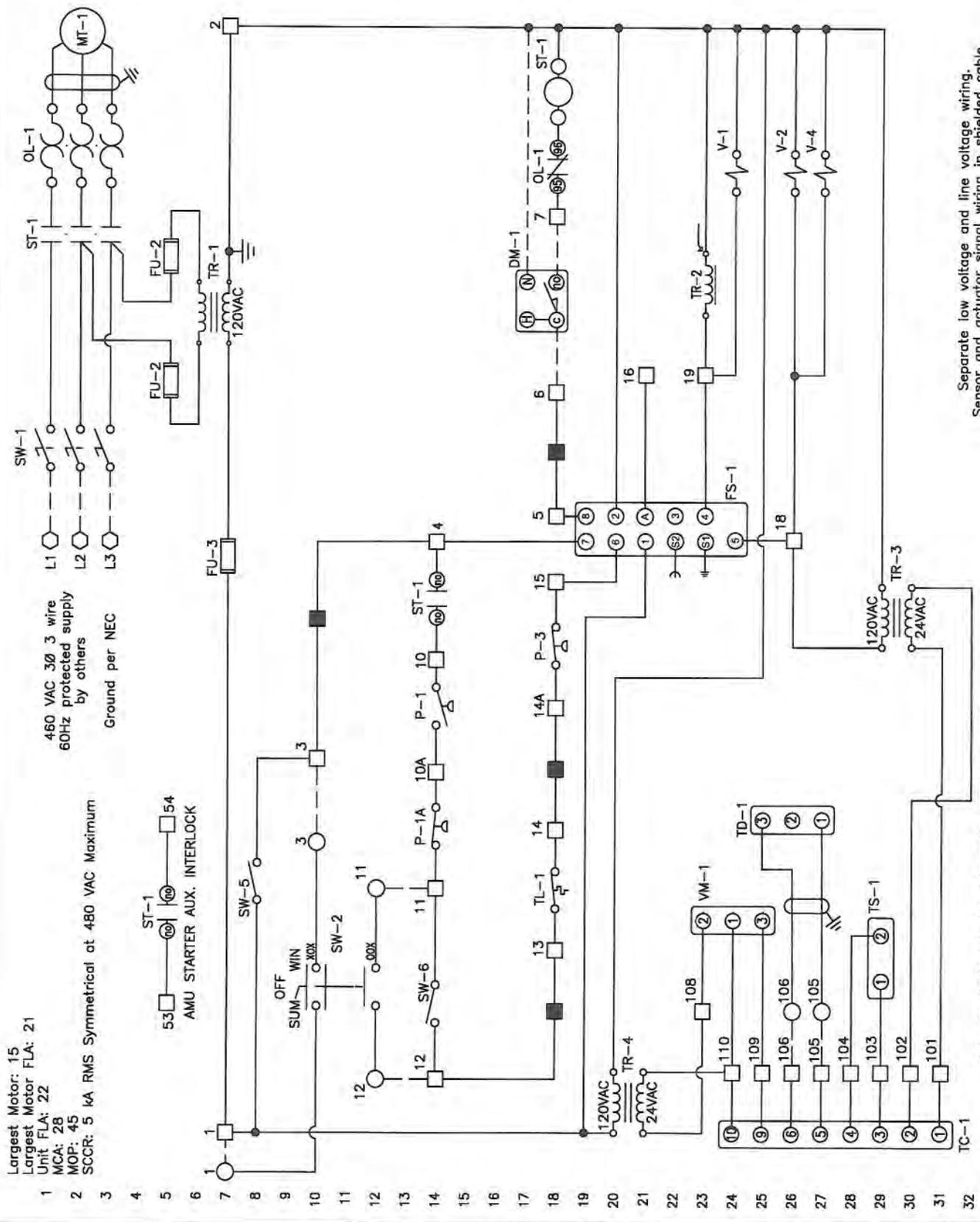


# UNIT LEGEND / GENERAL PARTS LIST

Model: TA - 122 NG VRH

S/N: 16281

Abbr.	Specification	#	Description	Abbr.	Description/Spec.	#
DM-1	Belimo LF 120-S us	1	Discharge Damper Motor			
FS-1	Fireye MEC120, MERT4, MEP537	1	Flame Safeguard			
FU-2	600VAC - Class CC Time Delay: 1.5 Amp	2	Trans. Primary Fuses			
FU-3	250VAC - Midget type: 3 Amp	1	Control Circuit Fuse			
MT-1	see motor specs. on right side of page.	1	Blower Motor			
P-1	Cleveland DDP-109-187 (0.2" & 0.95")	1	Air Flow Switch			
P-2	See Gas Train/Burner Specs.	na	Low Gas Pressure Sw.			
P-3	See Gas Train/Burner Specs.	na	High Gas Pressure Sw.			
ST-1	Eaton XTCE025C10A, XTOE020CCS & XTCEXFAC20	1	Starter, OL & Aux.			
SW-1	ABB OT40F3, OHB65J6, OXP6X265	1	Equipment Disconnect			
SW-2	AB 800FP-SM32, -ALPX20	1	Summer-Off-Winter Switch			
SW-5	Carlingswitch 111-16-73	1	Blower Service Switch			
SW-6	Carlingswitch 111-16-73	1	Burner Service Switch			
<b>REMOTE PANEL(S)</b>						
TC-1	RTC DFC	1	Temperature Controller	ASE 8 x 6 x 4		1
TD-1	RTC DFTD (40°F - 90°F)	1	Discharge Temp. Selector			
TL-1	Honeywell L4008E1255	1	High Temperature Limit			
TR-1	Micron B250MBT13RKF	1	Control Transformer			
TR-2	Honeywell Q652B1006	1	Ignition Transformer			
TR-3	Honeywell AT120B1028	1	24 VAC Transformer			
TR-4	Honeywell AT120B1028	1	24 VAC Transformer			
TS-1	RTC DFTS w/ DAT-12	1	Discharge Temp. Sensor			
V-1	See Gas Train/Burner Specs.	na	Pilot Shutoff Valve	Blower: Lau A22-22H		1
V-2	See Gas Train/Burner Specs.	na	Main Safety Shutoff Valve	P.B. Bearings: VPB-231-AH		2
V-3	See Gas Train/Burner Specs.	na	Vent Valve	Motor Sheave: MVS 150-2		1
V-4	See Gas Train/Burner Specs.	na	Aux. Safety Shutoff Valve	Bore: 1 5/8"		
V-5	See Gas Train/Burner Specs.	na	Modulating Gas Valve	Turns Open: 3 1/2		
VM-1	Belimo LMCB24-SR-T	1	Mod. Gas Valve Actuator	Blower Sheave: 2/5V1250SF		1
	Micron 5161292	3	Control Trans. Fuse Cover	RPM: 691		
	Micron 5161221	1	Ctrl. Trans. Terminal Cover	Bushing: SF x 1 15/16"		
				Belts: 5VX-		2
				Coupling:		na
<b>SCHEMATIC SYMBOLS</b>						
#	Unit Control Panel Terminal					
⊗	Remote Panel Terminal					
○	Terminal in Others Panel					
- - -	Field Wiring (by Others)					
■	Jumper Wire					
●	Wire Connection					
Terminal no.'s 1 to 99 designate 120 volt; no.'s 100+ designate low volt wiring (run in shielded cable). Ground unit according to N.E.C. CAUTION: Open disconnect switch before servicing unit.						



Largest Motor: 15  
Largest Motor FLA: 21  
Unit FLA: 22  
MCA: 28  
MOP: 45  
SCCR: 5 kA RMS Symmetrical at 480 VAC Maximum

480 VAC 3Ø 3 wire  
60Hz protected supply  
by others  
Ground per NEC

53 ST-1  
AMU STARTER AUX. INTERLOCK

OFF WIN  
SW-2

11 SW-6

10A P-1  
10A P-1  
10A P-1

120VAC TR-4  
24VAC

120VAC TR-3  
24VAC

120VAC TR-2  
24VAC

120VAC TR-1  
24VAC

120VAC TR-1  
24VAC

120VAC TR-1  
24VAC

120VAC TR-1  
24VAC

Separate low voltage and line voltage wiring.  
Sensor and actuator signal wiring in shielded cable.

Refer to Parts List for Schematic Symbol Legend



**NOTES:**

- BOOTH IS FABRICATED FROM UNPAINTED 18 GAGE GALVANIZED SHEET STEEL, PRE-PUNCHED AND COMPANION FLANGED FOR BOLT TOGETHER ASSEMBLY.
- BOOTH'S SUPPORT STRUCTURE IS FABRICATED FROM PRE-PUNCHED 12 GAGE GALVANIZED.
- INCLUDED, BUT NOT SHOWN:
  - (1) NEMA 12 CONTROL PANEL, 480 VOLT w/CONSTA-FLOW (CF-5-1)
  - (1) MANOMETER
  - (1) 1/2" SOLENOID VALVE
  - (1) #34" GUY WIRE KIT

**CUSTOMER APPROVAL OF DRAWINGS**

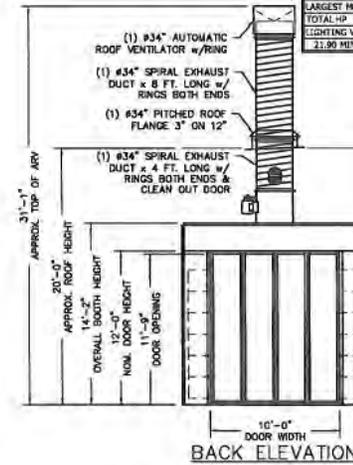
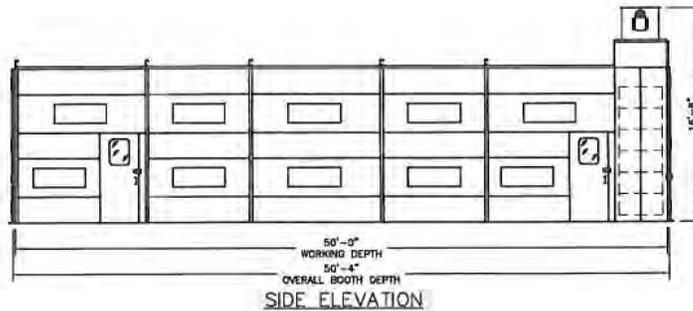
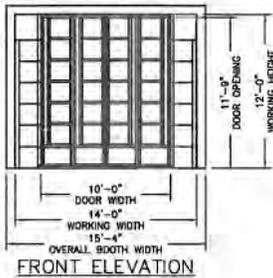
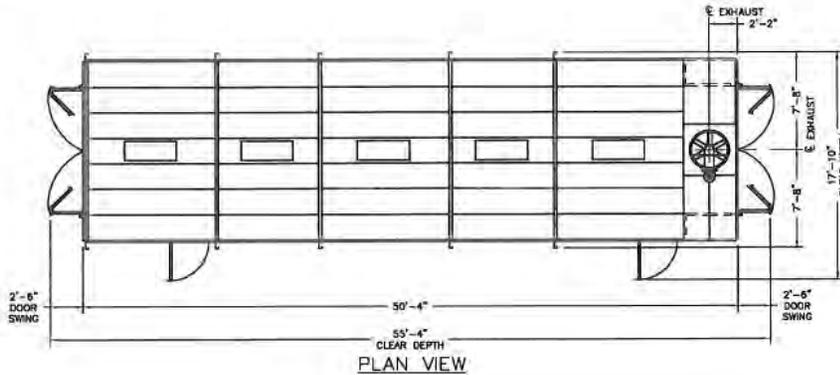
Signed drawing(s) is a statement that the dimensions, design and application have been reviewed and are approved for fabrication.

- Approved as submitted
- Approved as noted
- Disapproved - Please resubmit

NOTE: MANUFACTURE OF EQUIPMENT WILL BE SCHEDULED AFTER RECEIPT OF APPROVED DRAWINGS.

CUSTOMER MUST FURNISH THE FOLLOWING INFORMATION:  
 Gas Pressure: \_\_\_\_\_ Gas Volume: \_\_\_\_\_  
 Voltage: \_\_\_\_\_ Phase: \_\_\_\_\_

Roof Pitch (if ordering duct): \_\_\_\_\_  
 NOTE: GFS WILL NOT BE RESPONSIBLE FOR BACK CHARGES RELATED TO THE ABOVE ITEMS WHEN PROVIDED WITH INCORRECT INFORMATION.  
 AUTHORIZED SIGNATURE: \_\_\_\_\_



**BOOTH EQUIPMENT SPECIFICATIONS**

EXHAUST FAN	
PART #	FAN-14VP-250TTE
DIAMETER	34"
CFM	16,800
STATIC PRESSURE	3/8"
CROSS-POWER	5
VOLTAGE	208/230/460
PHASE	3
ENCLOSURE	TEPC
QUANTITY	1

LIGHTS	
PART #	LABW12-4
SIZE	48"
TUBES - (INCL.)	4
TYPE	FLUORESCENT
VOLTAGE	120/277
RATING	CLASS 2 DIV. 2
ACCESS	INSIDE
QUANTITY	25

INTAKE FILTERS	
PART #	217-012
SIZE	20" x 22" x 1"
QUANTITY	36

EXHAUST FILTERS	
PART #	FIL-EPF-202B-W
SIZE	20" x 20" x 2"
QUANTITY	36

PRODUCT DOORS	
SIZE	10W x 12H
TYPE	FILTERED
STYLE	BI-FOLD
QUANTITY	1

PRODUCT DOORS	
SIZE	10W x 12H
TYPE	SOLID
STYLE	BI-FOLD
QUANTITY	1

MAN ACCESS DOOR	
SIZE	3W x 7H
TYPE	SOLID w/CBS
QUANTITY	2

ELECTRICAL INFO	
OPERATING VOLTAGE	480 VOLT 3PH 3 WIRE
FULL LOAD AMPS	17.52
LARGEST MOTOR HP	5
TOTAL HP	5
LIGHTING VOLTAGE	120
	21.90 MIN AMP SERVICE REQ.



GLOBAL FINISHING SOLUTIONS, LLC  
 12721 HORNWAY ROAD  
 CROSSBART, TN 37028  
 PHONE: 615.948.8738 OR 800-468-5872

CONCEPT	REVISION	BY	REV. 1.3	DATE	BY	REV. 1.2	DATE	BY	REV. 1.1	DATE

PROJECT: CDC-1412NDT-50-BB-XB-5  
 CROSSBART, 14W x 12H x 50D, DRIVE THRU

SCALE: 1/4" = 1'-0"  
 DRAWN BY: DWG/2016  
 DATE: 3/9/2016

CUSTOMER: FINISHING CONSULTANTS  
 INTERSTATE GROUP, LLC

ORDER / SERIAL NUMBER	U66711-A
SHEET	1 of 1



## Operating Instructions and Parts Manual DC-1200VX Series Dust Collectors



*DC-1200VX with Bag Filter Kit*

*Now with*



*DC-1200VX with Canister Kit*

**JET**  
427 New Sanford Road  
LaVergne, Tennessee 37086  
Ph.: 800-274-6848  
www.jettools.com



**Part No. M-710701**  
Revision B 07/2014  
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# Specifications

## Main Dust Collection Kits

<i>Model Numbers</i>	<i>Stock Numbers</i>
DC-1200VX-BK1 (Single Phase, with 30 Micron Bag Filter Kit).....	710701K
DC-1200VX-BK3 (Three Phase, with 30 Micron Bag Filter Kit).....	710703K
DC-1200VX-CK1 (Single Phase, with Canister Filter Kit).....	710702K
DC-1200VX-CK3 (Three Phase, with Canister Filter Kit).....	710704K

## Base Machine

Stock Number.....	710701	710703
Impeller Diameter.....	12	12
Sound Rating at 3 foot distance.....	70-80 db	70-80 db
1-Hose Connection Diameter (in.).....	6	6
2-Hose Connection Diameter (in.).....	4	4
Air Flow (CFM).....	1,200	1,200
Velocity at 4" (FPM).....	13,745	13,745
Static Pressure (inch of water).....	11.5	11.5
Overall Dimensions with Bag Filter installed-approx.(in.).....	37L x 28W x 79H	37L x 28W x 79H
Motor, TEFC.....	2HP, 1PH, 230V only	2HP, 3PH, 230/460V
.....	8A, 60Hz	Prewired 230V, 6/3A, 60Hz
Net Weight, approximate (lbs).....	127	127

## 30 Micron Filter Bag Kit

Stock Number.....	708636F
Filter Bag Efficiency.....	96% of 30 micron particles
Filter Bag Length, installed (in.).....	32
Filter and Collector Bag Diameter (in.).....	20
Collector Bag Capacity (cu. ft.).....	5.3
Collector Bag Length, installed (in.).....	29

## Canister Filter Kit

Stock Number.....	708639B
Canister Length (in.).....	25
Canister Efficiency.....	86% of 1 micron particles; 98% of 2 micron particles
Collector Bag Diameter (in.).....	20
Collector Bag Capacity (cu. ft.).....	5.3
Collector Bag Length, installed (in.).....	29

## 5 Micron Filter Bag Kit (Optional Accessory)

Stock Number.....	708636MF
Filter Bag Efficiency.....	74% of 1 micron particles; 92% of 3 micron; 98% of 5 micron
Filter Bag Length, installed (in.).....	32
Filter and Collector Bag Diameter (in.).....	20
Collector Bag Capacity (cu. ft.).....	5.3
Collector Bag Length, installed (in.).....	29

## IR Remote Control Unit (Optional Accessory)

Stock Number (main unit and remote control switch) (230V only).....	708636D
Stock Number (Remote Control Switch only).....	708636T

*The above specifications were current at the time this manual was published, but because of our policy of continuous improvement, JET reserves the right to change specifications at any time and without prior notice, without incurring obligations.*



**Read and understand the entire contents of this manual before attempting set-up or operation! Failure to comply may cause serious injury.**

Exhaust



THIS MSDS COMPLIES WITH 29 CFR 1910.1200 (THE HAZARD COMMUNICATION STANDARD)

FRM: NDS1502

PAGE: 1 of 3

**IDENTITY**

**GLASS FIBER AIR FILTER MEDIA**

**SECTION I**

Manufacturer's Name: Chemco Manufacturing Company  
Address: 515 Huehl Rd  
Northbrook, IL 60062

Revised: 3 MAY, 2011  
Supersedes: 5 JANUARY, 2003

Telephone Number for Information: 1-703-527-3887 Chemtrec  
Emergency Telephone Number: 1-800-424-9300 Chemtrec

**SECTION II ---- HAZARDOUS INGREDIENTS / IDENTITY INFORMATION**

Hazardous Components (Specific Chemical Identity, Common Name(s))

	OSHA PEL	ACGIH TLV	Other Limits	
			Recommended	% (Optional)
GLASS, FIBROUS (14-34 microns diam.)	N.A.	N.A.	N.A.	50.0 - 100.0
CURED UREA FORMALDEHYDE	N.A.	N.A.	N.A.	0.0 - 50.0

N.L.: NOT LISTED

N.A.: NOT AVAILABLE

N/A: NOT APPLICABLE

**SECTION III ---- PHYSICAL / CHEMICAL CHARACTERISTICS**

Boiling Point:	N.A.	Specific Gravity (H <sub>2</sub> O=1)	N.A.
Vapor Pressure (mm HG):	N.A.	Melting Point:	>1400 F
Vapor Density (Air = 1):	N.A.	Evaporation Rate (Butyl Acetate)	N/A
Solubility in Water:	INSOLUBLE		

Appearance and Odor: OPEN GLASS FIBER, COLOR VARIES, NO ODOR.

**SECTION IV ---- FIRE AND EXPLOSION HAZARD DATA**

FLASH POINT (Method Used): N.A.	Flammable	LEL	UEL
	Limits:	N.A.	N.A.

Extinguishing Media: WATER FOG, DRY CHEMICAL, FOAM CARBON DIOXIDE

Special Fire Fighting Procedures: WEAR PROTECTIVE SUIT AND SELF-CONTAINED BREATHING APPARATUS

NOXIOUS FUMES MAY BE PRODUCED DURING COMBUSTION.

Unusual Fire Fighting Hazards: SEE ABOVE.

**SECTION V ---- REACTIVITY DATA**

Stability:	Unstable		Conditions to Avoid: NONE
	Stable	X	

Incapability (Materials to Avoid): NONE

Hazardous Decomposition or Byproducts: CARBON DIOXIDE, CARBON MONOXIDE, HYDROCARBONS, CARBON PARTICLES, ALDEHYDES, TRACES OF HYDROGEN CYANIDE DERIVED FROM PYROLYSIS OF THE RESIN BINDER IS TYPICAL

Hazardous Polymerization	May Occur		Conditions to Avoid: NONE
	May Not Occur	X	

**SECTION VI ---- HEALTH HAZARD DATA**

Route(s) of Entry	Inhalation?	Skin?	Ingestion?	Eyes?
-------------------	-------------	-------	------------	-------

Health Hazards (Acute and Chronic):

Skin Contact: NUISANCE DUST MAY CAUSE RASH AND / OR ITCHING.  
Eye Contact: DIRECT CONTACT MAY CAUSE ACUTE MECHANICAL IRRITATION.  
Inhalation: MAY CAUSE ACUTE MECHANICAL IRRITATION OF THE MOUTH, NOSE, AND THROAT.

Carcinogenicity:	NTP?	NO	IARC Monographs?	NO	OSHA Regulated?	NO
------------------	------	----	------------------	----	-----------------	----

Signs and symptoms of exposure:

SKIN: THE FIBERGLASS MAY IRRITATE THE SKIN OF SOME WORKERS AS WELL AS SOME PEOPLE WHO FABRICATE OR INSTALLERS OF MATERIALS CONTAINING FIBERGLASS. THIS SKIN IRRITATION AND POSSIBLE INFLAMMATION IS A MECHANICAL REACTION. THIS IRRITATION MAY PRODUCE A RASH AND / OR ITCHING

INHALATION: THE FILAMENT DIAMETERS IN THESE PRODUCTS IS SUCH THAT THEY ARE NON-RESPIRABLE. MEANING, THEY ARE TOO LARGE TO PENETRATE DEEPLY INTO THE LUNG, BUT WILL BE CAUGHT IN THE UPPER AIRWAYS. LIKE SKIN IRRITATION UPPER RESPIRATORY IRRITATION IS MECHANICAL. AIRBORNE GLASS FIBER MAY PRODUCE COUGHING AND WHEEZING.

EYES: THE IRRITATION TO THE EYES, LIKE THE SKIN AND RESPIRATORY TRACT, IS MECHANICAL. IRRITATION MAY CAUSE ITCHING, WATERING AND / OR REDDENING OF THE EYES.

INGESTION: INGESTION IS HIGHLY UNLIKELY PRIMARILY DUE TO THE FACT THAT THE GLASS FIBER WILL BE CAUGHT IN THE UPPER RESPIRATORY TRACT.

Medical Conditions Generally Aggravated by Exposure: ANY CONDITIONS GENERALLY AGGRAVATED BY MECHANICAL IRRITANTS IN THE AIR OR ON THE SKIN

Emergency and First Aid Treatment:

SKIN: IRRITATION NORMALLY DOES NOT PERSIST FOR ANY LENGTH OF TIME AND CAN BE RELIEVED BY WASHING EXPOSED SKIN AREAS GENTLY IN WARM WATER AND MILD SOAP. DO NOT RUB OR SCRATCH. IF IRRITATION PERSISTS CONTACT PHYSICIAN.

INHALATION: REMOVE TO FRESH AIR. ANY COUGHING OR WHEEZING USUALLY SUBSIDES SOON AFTER THE WORKER IS REMOVED FROM EXPOSURE. IF CONDITION PERSISTS CONTACT PHYSICIAN.

EYES: FLUSH WITH RUNNING WATER. DO NOT RUB. IF IRRITATION PERSISTS, CONTACT A PHYSICIAN

INGESTION: NONE REQUIRED.

**SECTION VII ---- PRECAUTIONS FOR SAFE HANDLING AND USE:**

Steps to be Taken in Case Material is Released or Spilled: NONE.

Waste Disposal Method: MAY BE DISPOSED IN A LANDFILL IN ACCORDANCE WITH LOCAL, STATE,  
AND FEDERAL REGULATIONS.

Precaution to Be taken in Handling and Storing:

SAFETY GLASSES AND GLOVES MAY BE WORN TO HELP REDUCE IRRITATION

Other Precautions: NONE.

**SECTION VIII ---- CONTROL MEASURES**

Respiratory Protection (Specify Type): NOT NORMALLY REQUIRED. IF IRRITATION OCCURS, OR IN AREAS OF HIGH EXPOSURE LEVELS A NIOSH APPROVED DUST / MIST RESPIRATOR IS GENERALLY ACCEPTABLE FOR MOST APPLICATIONS WHEN HANDLING OR WORKING WITH FIBERGLASS PRODUCTS.

Ventilation:	Local Exhaust: IN AREAS OF HIGH CONCENTRATION	Special: NONE
	Mechanical (General) YES.	Other: NONE
Protective Gloves: OPTIONAL, FOR COMFORT	Eye Protection: GOGGLES OR SAFETY GLASSES WITH SIDESHEILDS	

Other Protective Clothing or Equipment:

OPTIONAL COVERALLS FOR HIGHLY SENSITIVE PERSONNEL

Work / Hygienic Practices: DO NOT USE COMPRESSED AIR TO CLEAN SURFACES, AS IT RE-ENTERS THE FIBERS AND DUST INTO THE BREATHING ZONE OF THE WORKERS. FIBERS AND DUST SHOULD BE CLEANED WITH A VACUUM OR THROUGH WET SWEEPING. WEARING LONG SLEEVED SHIRTS AND BLOUSES, LOOSE AT THE NECK AND WRIST, ALONG WITH LONG PANTS AND CAPS WILL PROTECT SKIN AREAS FROM COMING IN CONTACT WITH GLASS FIBER. LOOSE CLOTHING HELPS PREVENT FIBER FROM RUBBING INTO THE SKIN. THE APPLICATION OF A BARRIER CREAM BEFORE WORKING WITH FIBERGLASS CAN MINIMIZE THIS EFFECT. GOOD PERSONAL HYGIENE. IT IS RECOMMENDED TO SHOWER AT END OF EACH WORK DAY. WASH CLOTHING SEPARATELY, RINSE WASHER AT END OF CYCLE.

THE INFORMATION CONTAINED HEREIN IS BELIEVED TO BE TRUE AND ACCURATE BUT IS NOT WARRANTED TO BE WHETHER ORIGINATING WITH THE COMPANY OR NOT. CUSTOMERS ARE ADVISED TO CONFIRM THAT INFORMATION IS CURRENT, APPLICABLE AND SUITABLE TO THEIR CIRCUMSTANCES.

**PAINT ARRESTANCE FILTER TEST REPORT**  
 Spray Removal Efficiency & Paint Holding Capacity  
 BASED ON 40 CFR PART 63 NATIONAL EMISSION STANDARD

Tested for: Chemco Mfg. Co.  
 Filter Mfr.: Chemco Mfg. Co.  
 Filter Name: PD MEDIA  
 Report#/Test#: R 828 T 928  
 Report Date: January 3, 2010

**Test Information**

FILTER DESCRIPTION: (20"x20")

Green on white highloft glass pad

PAINT DESCRIPTION:

High Solids Baking Enamel (S.W. #1 Permaclad 2400, red)

PAINT SPRAY METHOD:

Conventional Air Gun at 40 PSI

SPRAY FEED RATE:

144 gr./min. 135 cc./min.

AIR VELOCITY:

150 FPM

**Test Results**

INITIAL PRESSURE DROP of Clean Test Filter

0.02 in. water

FINAL PRESSURE DROP of Loaded Test Filter

0.07 in. water

WEIGHT GAIN OF FILTER & TEST FRAME THROUGH

4232 grams

PAINT HOLDING CAPACITY of TEST FILTER

1263 grams = 2.8 lbs.

PAINT RUN-OFF

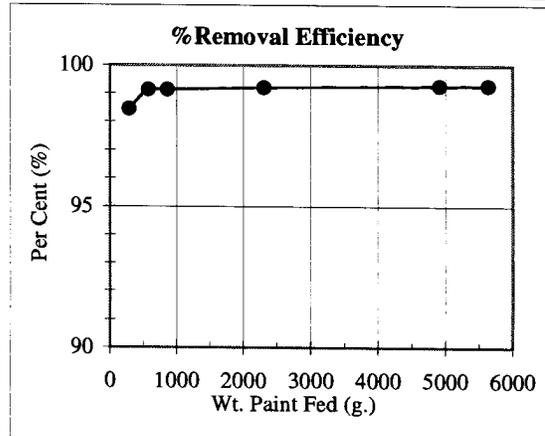
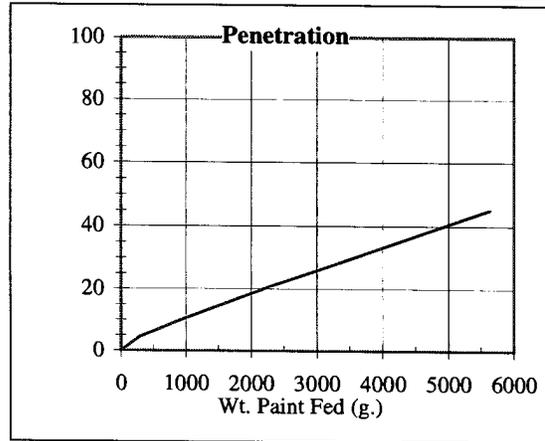
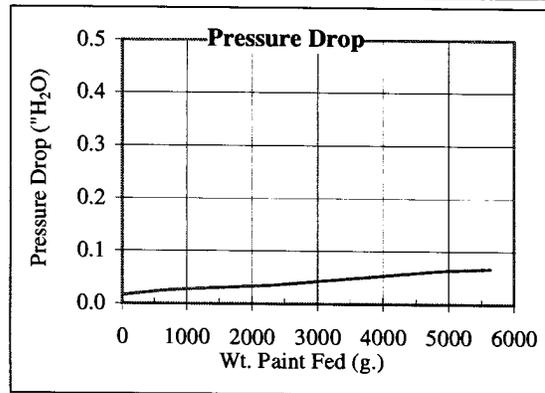
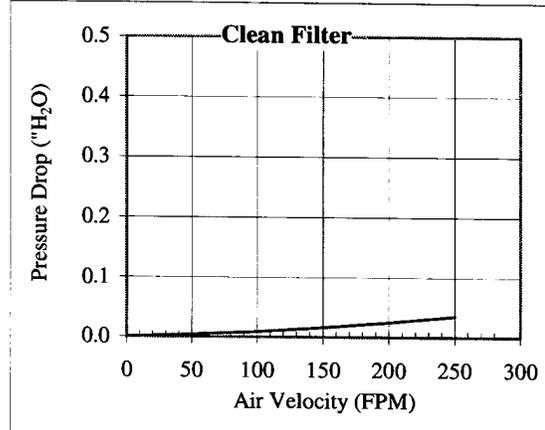
2969 grams

WEIGHT GAIN on FINAL FILTER

45.1 grams = PENETRATION

AVERAGE REMOVAL EFFICIENCY of TEST FILTER

98.95 %



Test Engineer: Todd Kruger

Supervising Engineer: K. C. Kwok, Ph.D.



# Wood Finishing Solutions

A full line of applicators and spray packages for wood applications



**Whether you are sealing, painting, staining or adhering, Graco's wood finishing equipment will suit your application!**

- Designed for superior performance and reliability
- Product solutions for each stage of the wood finishing process
- Deliver material while increasing efficiency and finish quality

PROVEN QUALITY. LEADING TECHNOLOGY.

# Spray Technologies

	Air Spray	Compliant	HVLP	Air-Assisted	Airless
Fluids (viscosity)	Low to Medium	Low to Medium	Low to Medium	Low to High	Medium to High
Finish Quality	Class A Decorative	Class A Decorative	Class A Decorative	Decorative Coating	Medium to Coarse
Max Spray Rate	20 oz/min	15 oz/min	10 oz/min	35 oz/min	> 40 oz/min
Transfer Efficiency* (test standards)					
ASTM D-5009	17 - 25%	25 - 32%	25 - 32%	30 - 40%	27 - 35%
EN 13966	60 - 70%	70 - 78%	70 - 78%	75 - 85%	70 - 80%
Typical Fluid Pressure**	5 - 20 psi	5 - 15 psi	4 - 10 psi	300 - 1500 psi	1000 - 2500 psi
Typical Atomizing Pressure**	10 - 60 psi	5 - 35 psi	5 - 30 psi	5 - 30 psi	0 psi
SCFM Requirements***	13 scfm	11 scfm	15 scfm	4 scfm	0 scfm
Graco Applicator	AirPro™	AirPro	AirPro	G15 or G40	XTR™
Graco Fluid Transfer Technology	Cup Guns Pressure Pots Triton®	Cup Guns Pressure Pots Triton	Cup Guns Pressure Pots Triton	Merkur® Merkur ES	Merkur Merkur ES

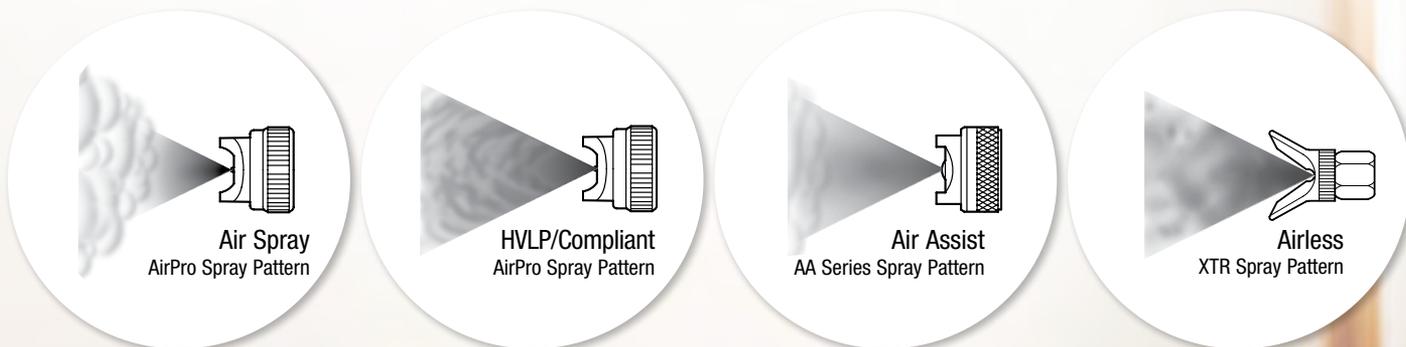
\*Using ASTM standard - 50% is the maximum transfer efficiency due to conveyor methods of spraying. EN standard sprays on a flat panel.

\*\*Pressure measured at the gun inlet under flow conditions. For best results, use the lowest fluid and air pressure for the job by determining flow rate and viscosity.

\*\*\*SCFM requirements are shown for gun only, and are averages. Pump air consumption is approximately 1.5 scfm for diaphragm pumps, and 2-5 scfm for piston pumps.

Note: typical air compressor sizing is 1 HP per 4 scfm.

## SPRAY TECHNOLOGIES



## DEFINITIONS

### AIR SPRAY/CONVENTIONAL

The most widely used finishing method. Referred to as an automotive finish or Class A finish. Easy to use, flexible and provides the finest finish quality and the lowest transfer efficiency.

### COMPLIANT

A controlled air spray technology that reduces bounceback and overspray. The finish quality is compatible to air spray, air consumption is lower than HVLP and the spray rates are higher than HVLP.

### HVLP

A controlled, compliant air spray technology that reduces bounceback and overspray. Finish quality is comparable to air spray, however atomization is generally coarser and spray rates are lower.

### AIR ASSIST

Combines the hydraulic atomization of airless with the atomization of air spray. Ideal for many finishing and coating applications, air assist offers high production levels and a relatively smooth finish - perfect for wood furniture topcoats or fabricated metal parts.

### AIRLESS

Directs fluid under high pressure through a controlled orifice to accomplish airless atomization. Ideal for quickly applying high volumes of coatings to large surfaces. Most often used to apply protective, rather than decorative coatings.

# Stain Applications

NGR and non-dye stains should be applied at low pressures due to the viscosity of the materials. Below are recommendations for low pressure equipment which will apply material with the consistency required to best enhance the wood's color.



## AirPro Spray Gun

Part #: 289109

- Conventional spray
- Pressure feed
- 0.040" nozzle

Improved transfer efficiency through reduced air consumption

Ergonomically designed for improved operator comfort

Available in HVLP (289110) and compliant (289111)



## AirPro Spray Gun

Part #: 289011

- Conventional spray, gravity feed
- 0.055" nozzle
- Includes 23 oz plastic cup

Improved transfer efficiency through reduced air consumption

Ergonomically designed for improved operator comfort

Available in HVLP (289014) and compliant (289017)



## Finex™ Spray Gun

Part #: 289244

- Conventional spray, gravity feed
- 0.055" nozzle
- Includes 20 oz plastic cup

Superior value air spray gun

3M™ PPS™ cup compatible

Available in HVLP (289239)



## Mini Finex Spray Gun

Part #: 289259

- HVLP, gravity feed
- 0.047" nozzle
- Includes 4 oz plastic cup

Superior value air spray gun

3M™ PPS™ cup compatible

Optional glaze nozzle (24F733) available



## Triton Air Spray Package

Part #: 289642

- 100 psi fluid and air pressure
- AirPro HVLP spray gun
- Pail mount, stainless steel pump

Double diaphragm design for smooth changeover and low pulsation

Quick and easy flushing reduces material waste

Available with conventional (289644) or compliant (289643) AirPro gun

Aluminum pump available with conventional (289647), HVLP (289645), or compliant (289643) AirPro gun



## Triton Air Spray Package

Part #: 289635

- 100 psi fluid and air pressure
- AirPro HVLP spray gun
- Cart mount, stainless steel pump

Double diaphragm design for smooth changeover and low pulsation

Quick and easy flushing reduces material waste

Available with conventional (289637) or compliant (289636) AirPro gun

Aluminum pump available with conventional (289640), HVLP (289638) or compliant (289639) AirPro gun



## 2.5 Gallon Pressure Tank

Part #: 223833

- Aluminum construction
- Up to 50 psi

Dual regulators provide convenient fluid and air control

Available with single regulator (171226)



## Pressure Cup

Part #: 239803

- Stainless steel construction
- 1 quart capacity

Dual regulators provide convenient fluid and air control

Available with single regulator (239802)

## Top Coat Applications

Top coats and sealers are generally applied with medium pressure equipment due to the mil thickness required for a high quality finish. Air assisted equipment will deliver optimal flow rates while maximizing transfer efficiency and increasing productivity.



### G15 AA Spray Gun

Part #: 24C853

- Air-assisted
- HVLP compliant
- Up to 1500 psi

Enhanced tip design provides uniform atomization and improved finish quality

Lightweight and low trigger pull for improved operator comfort



### Mercur Spray Package

Part #: G15C09

- 15:1 air-assisted pump, 0.4 gpm
- G15 AA gun
- 25 ft hose set

Pump outlet filter improves material cleanliness for enhanced spray performance

Easy flush pump lower allows fast color change and reduced solvent usage

Wall mount version also available (G15W07)



### Mercur ES Spray Package

Part #: 24F151

- 15:1 air-assisted pump
- G15 AA gun
- 25 ft hose set

Quick flush pump reduces material and solvent usage

Wall mount (24F150) and stainless steel stand (24F159) and wall (24F158) versions also available



### 5 Gallon Pail Mount Agitator

Part #: 243340

- Stainless steel agitator
- Stainless steel pail cover
- 1/4 HP air driven motor

Carbon steel 5 gallon pail cover with stainless agitator also available (226086)

## Adhesive Applications

Adhesive applications vary in requirements from a bead of material to a full spray pattern. Low pressure equipment will assist in delivering the adhesive to the wood.



### AirPro Spray Gun

Part #: 288982

- Conventional spray
- Pressure feed
- 0.051" nozzle

Unique aircap designed for spraying adhesive

Ergonomically designed for improved operator comfort



### AirPro Pressure Tank Packages

Part #: 24C828

- AirPro adhesive spray gun
- 2.5 gallon aluminum pressure pot
- 25 foot hose set

Dual regulators provide convenient fluid and air control

All written and visual data contained in this document are based on the latest product information available at the time of publication. Graco reserves the right to make changes at any time without notice.

Call today for product information or to request a demonstration.  
**877.84GRACO** (1-877-844-7226) or visit us at [www.graco.com](http://www.graco.com).

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*Undercoat Gun*

Instructions – Instrucciones – Instruções



Contractor II and FTx II Spray Guns

309639N

Pistolets pulvérisateurs Contractor II et FTx II

Pistolas de pulverización Contractor II y FTx II

Pistolas de Pintura Contractor II e FTx II

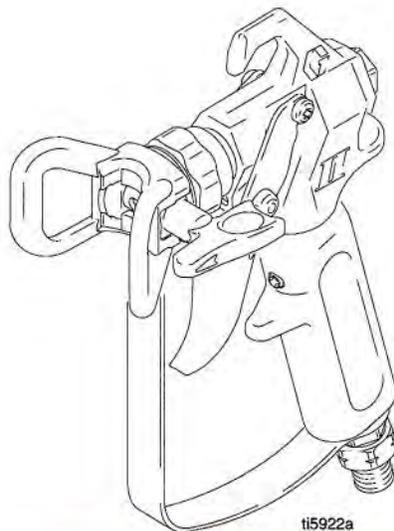
- *For applying architectural paints and coatings –*
- *Pour appliquer les peintures et les enduits architecturaux –*
- *Para aplicar las pinturas y las capas arquitectónicas –*
- *Para aplicar pinturas e revestimentos architectural –*



**Important Safety Instructions**

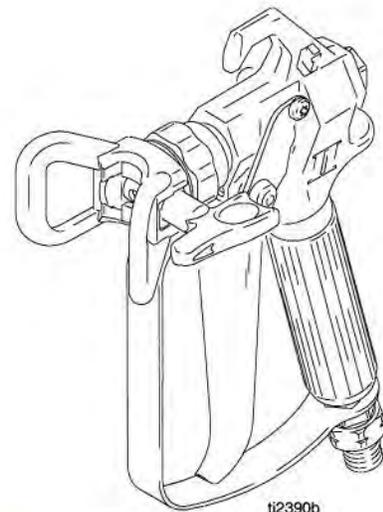
Read all warnings and instructions in this manual.  
Save these instructions. See list of Models, page 2.

*Maximum Working Pressure / Pression de service maximum /  
Presión máxima de funcionamiento / Pressão máxima de trabalho de  
3600 psi (252 bar, 25 MPa)*



ti5922a

**Model / Modèle / Modelo 246220 & 249942**



ti2390b

**Model / Modèle / Modelo 246230**

## Models / Modèles / Modelos

Gun Pistolet Pistola	Finger Trigger Gâchette doigt Gatillo para dedos Gatilho de dedos	CE Mark Sigle CE Marca CE	Model Modèle Modelo	Guard Garde Protección Protector	Tip Buse Boquilla Bico
Contractor II	2		246220	RAC X Handtite	RAC X 517
Contractor II	4		246221	RAC X Handtite	RAC X 517
Contractor II – Europe / Europa	2	✓	246222	RAC X Handtite	RAC X 517
Contractor II – Europe / Europa	2	✓	246538	RAC 5 Handtite	
Contractor II	2		824987	RAC 5 Handtite	RAC 5 517
Contractor II	2		246434	RAC 5 Handtite	RAC 5 517
Contractor II	2		246224	Flat Tip Guard Protección de boquilla plana Protector de bico directo	
Contractor II	4		246225	Flat Tip Guard Protección de boquilla plana Protector de bico directo	
FTx II	4		246230	RAC X Handtite	RAC X 515
FTx II	2		246231	RAC X Handtite	RAC X 515
FTx II – Europe / Europa	4	✓	246232	RAC X Handtite	RAC X 517
FTx II – Asia / Asie / Ásia	4		246233	RAC X Handtite	RAC X 517
FTx II	4		246234	Flat Tip Guard Protección de boquilla plana Protector de bico directo	
FTx II	2		246235	Flat Tip Guard Protección de boquilla plana Protector de bico directo	
FTx II	4		246435	RAC 5 Handtite	RAC 5 515
FTx II Europe / Europa	4	✓	246539	RAC 5 Handtite	
FTx II – Asia / Asie / Ásia	4		246540	RAC 5 Handtite	RAC 5 517

All models not available in all countries

Tous les modèles ne sont pas disponibles dans tous les pays

Hay modelos que no se distribuyen en todos los países

Nem todos os modelos se encontram disponíveis em todos os países

## Ultra Max 695™ Airless Paint Sprayers

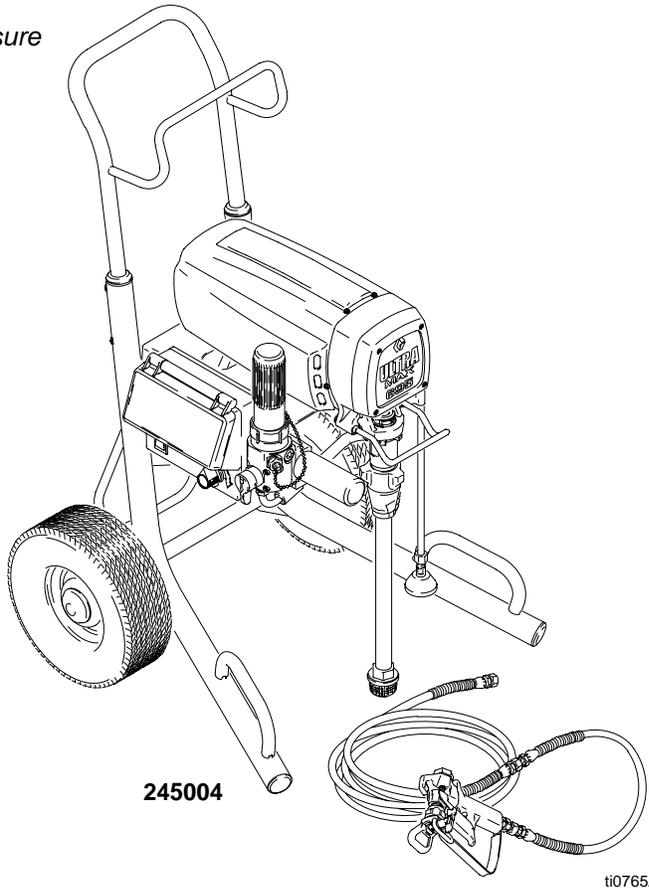
3300 psi (227 bar, 22.7 MPa) Maximum Working Pressure

### 220–240 VAC

Type	Series	Hi-boy	Lo-boy
695™	B	245004	245005
	A	246927	

### 100–120 VAC

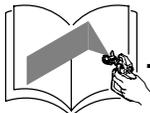
Type	Series	Hi-boy	Lo-boy
695™	B	245006	245008
		245007	



#### Important Safety Instructions

Read all warnings and instructions in the related manuals referenced below. Save these instructions.

Related manuals



..... 309257

Operation



..... 309639

Spray Gun



..... 309251

Sprayer Repair



..... 309250

Pump Repair



..... 309055

Spray Tip



..... 309278

AutoClean



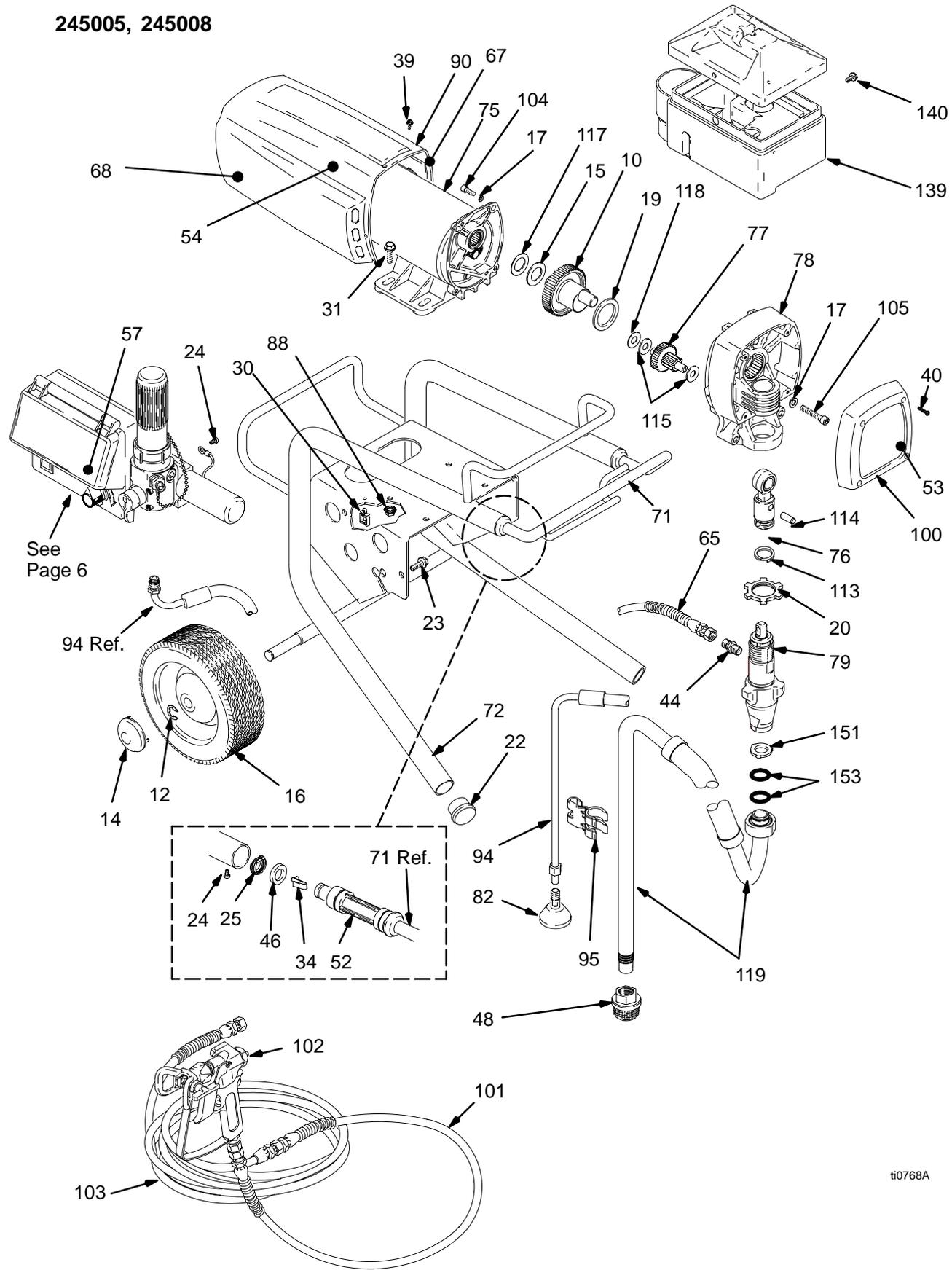
# Parts List - Sprayer

245004, 245006, 245007, 246927

REF NO.	PART NO.	DESCRIPTION	QTY	REF NO.	PART NO.	DESCRIPTION	QTY
10	244245	10+15, 19, 117	1	78	244205		1
12	101242		2	79	246428	Manual 309250	1
14	104811		2	82	241920		1
15	107434		1	85	243301▲		1
16	106062		2	88	110996		4
17	104008		4	90	244254		1
19	180131		1	91	196713		1
20	195150		1	92	196714		2
22	108691		2	94	244240	94+82	
23	111801		2	95	197124		1
24	109032		5	100	244238	100+40, 91	
25	101354		2	101	238358		1
31	112586		4	102	246220	Manual 309639	1
33	112746		2	103	240794		1
34	112827		2	104	101864		2
39	115492		4	105	116138		2
40	114418		4	113	196750		1
44	162453		1	114	196762		1
46	183350		2	115	116079		2
48	246385		1	117	116074		1
52	192027		2	118	116073		1
53	243301▲		1	119	15B833		1
54	192719		1	139	824173	(245007)	1
57	196670		1	140	114423	(245007)	3
61	114687		1	150	103413		2
65	243994		1	151	115099		1
71	245245		1	152	15B434		1
72	196617		1	154	15B652		1
75	243720†	220–240V (245004)	1	▲Extra Danger and Warning tags and labels available free.			
	243718*	100–120V (245006, 245007)	1	* Motor Brush Kit 236967 is available			
76	244243		1	† Motor Brush Kit 243268 is available			
77	244242	77+115, 118	1				

# Parts Drawing - Sprayer

245005, 245008



ti0768A

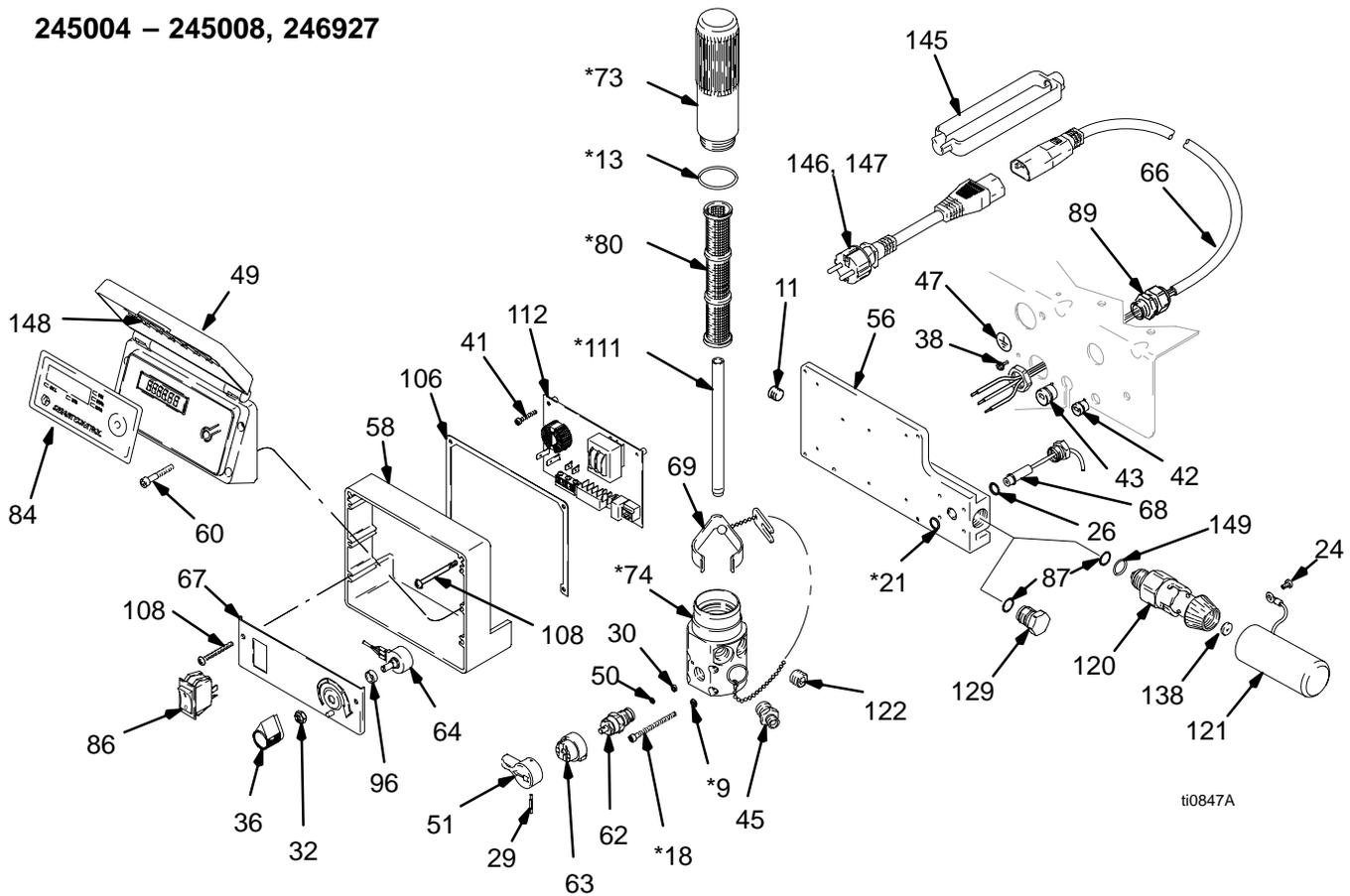
# Parts List - Sprayer

245005, 245008

REF NO.	PART NO.	DESCRIPTION	QTY	REF NO.	PART NO.	DESCRIPTION	QTY
10	244245	10+15, 19, 117	1	76	244243		1
12	101242		2	77	244242	77+115, 118	1
14	104811		2	78	244205		1
15	107434		1	79	246428		1
16	195766		2	82	241920		1
17	104008		4	88	110996		4
19	180131		1	90	244254		1
20	195150		1	94	244239	94+82, 95	1
22	107310		2	95	276888		1
23	111801		2	100	244238		1
24	109032		5	101	238358		1
25	116227		2	102	246220	Manual 309639	1
30	114687		1	103	240794		1
31	112586		4	104	101864		2
34	178565		1	105	116138		2
39	115492		4	113	196750		1
40	114418		4	114	196762		1
44	162453		1	115	116079		2
46	195673		2	117	116074		1
48	246385		1	118	116073		1
52	195501		2	119	246010	119+48, 82, 89, 94, 95	
53	196713		1	139	824173	(245008)	1
54	196714		2	140	114423	(245008)	3
57	196670		1	151	115099		1
65	243994		1	153	117559		2
67	243301▲		1	▲Extra Danger and Warning tags and labels available free.			
68	195833▲		1	* Motor Brush Kit 236967 is available			
71	243205		1	† Motor Brush Kit 243268 is available			
72	196746		1				
75	243720†	220-240V (245005)	1				
	243718*	100-120V (245008)	1				

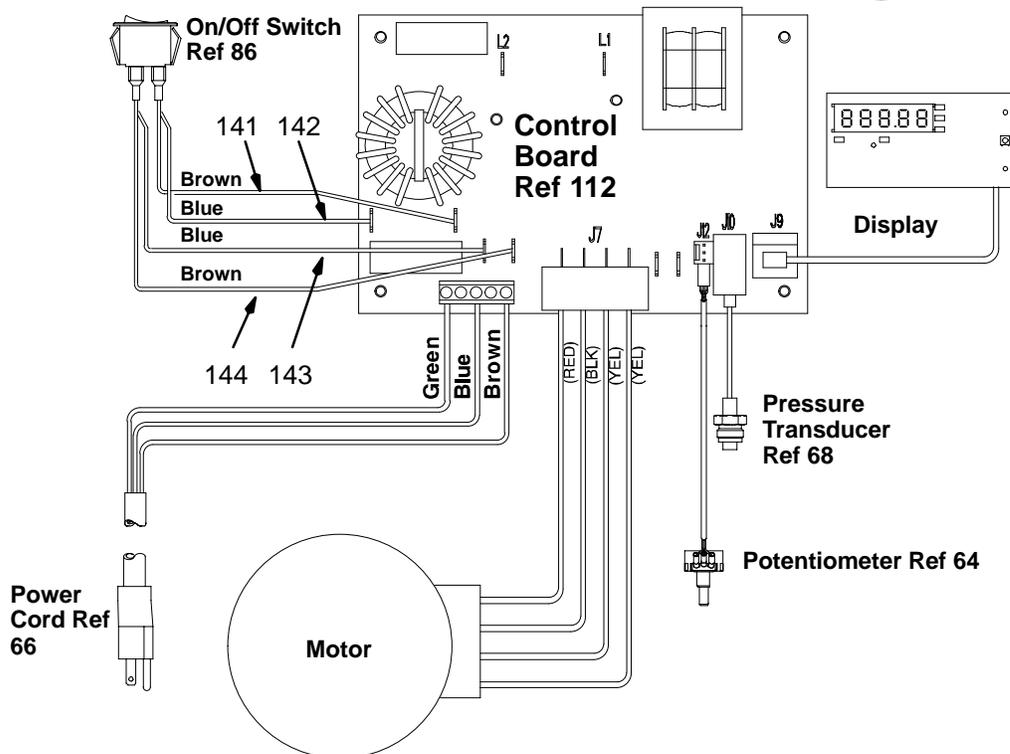
# Parts Drawing - Sprayer

245004 – 245008, 246927



ti0847A

# 245004 – 245006, 246927 Wiring Diagram



ti0944A

# Parts List - Sprayer

245004 – 245008, 246927

REF NO.	PART NO.	DESCRIPTION	QTY	REF NO.	PART NO.	DESCRIPTION	QTY
9*	100020		4	74*	196676		1
11	100721		1	80*	244067		1
13*	104361		1	84	196668	(245004 – 245008)	1
18*	107183		4		15A899	(246927)	1
21*	107505		1	86	116270		1
26	111457		1	87	197055		1
29	111600		1	89	116171	(245007, 245008)	1
30	111699		1		116101	(245004 – 245006)	1
32	112382		1	96	116200		1
36	116167		1	106	196707		1
38	114391	(245007, 245008)	1	108	116304		4
41	114420		6	111*	196786		1
42	116354		1	112	244518	(245004, 245005)	1
43	114689		1		244523	(245006)	1
45	164672		1		244237	(245007, 245008)	1
47	186620	(245007, 245008)	1	120†	244253	120+87	1
49	244537	(245004, – 245006)	1	121†	191178		1
	244536	(245007, 245008)	1	122	101754		1
	245873	(246927)	1	129	196781	(246927)	1
50	187615		1	138†	115524		1
51	187625		1	141	197955	(245004 – 245006)	1
56	196699		1	142	197956	(245004 – 245006)	1
58	196191		1	143	197083	(245004 – 245006)	1
60	116252		4	144	197084	(245004 – 245006)	1
62	235014		1	145	195551	(245004, 245005)	1
63	224807		1	146	242001		1
64	236352		1	147	243280	SWITZERLAND	1
66	244284	(245004, 245005)	1			AUSTRALIA	1
	197189	(245006)	1			DENMARK	1
	196831	(245007, 245008)	1			ITALY	1
67	196678		1	148	196669	(245007, 245008)	1
68	243222	68+26	1		197785	(245004 – 245006)	1
69	244724		1	149†	102982		1
70	244285	(245007, 245008)	1			* Included in Filter Repair Kit 244513	
73*	196675		1			† (246927)	



**Table 2-2: Indirect Heater Natural Gas Combustion Emissions**

Heater Combustion Source	No. of units	Input Duty		Emission Points
		Btu/hr	MMBtu/hr	
SunStar Natural Gas Heater Infrared Vacuum Compact U-Tube	10	35000	0.35 MMBtu/hr	

**Office & Warehouse Indirect Air Heater Duty =**

**0.35 MMBtu/hr ÷ 1,020 MMBtu/MMscf = 3.43E-04 MMscf/hr**

Fuel Use:

Operating Assumptions:

**24 hr/day**  
**8,760 hr/yr<sup>3</sup>**

**0.008 MMscf/day**  
**3.006 MMscf/year**

Criteria Air Pollutants	Emission Factor <sup>1</sup>	Emissions	
	lb/MMscf	lb/hr	T/yr
NO <sub>2</sub>	94	0.0323	0.14
CO	40	0.01	0.06
PM <sub>10</sub>	7.6	0.0026	0.01
PM <sub>2.5</sub>	7.6	0.003	0.01
SO <sub>2</sub>	0.6	2.1E-04	9.0E-04
VOC	5.5	1.9E-03	8.3E-03
Lead	0.0005	1.7E-07	7.5E-07
		1.2E-04	lb/month
<b>Total Criteria Emissions (ton/yr) =</b>		<b>0.22</b>	

Hazardous & Toxic Air Pollutants (HAP & TAP)	Emission Factor <sup>1</sup>	Emissions		Modeling Threshold TAP Screening Emission Level	Modeling Required?
		lb/MMscf	lb/hr <sup>2</sup>		
<b>PAH HAPs</b>					
2-Methylnaphthalene	2.40E-05	<b>8.24E-09</b>	3.6E-08	9.1E-05 lb/hr	No
3-Methylchloranthrene	1.80E-06	<b>6.18E-10</b>	2.7E-09	2.5E-06 lb/hr	No
Acenaphthene	1.80E-06	<b>6.18E-10</b>	2.7E-09	9.1E-05 lb/hr	No
Acenaphthylene	1.80E-06	<b>6.18E-10</b>	2.7E-09	9.1E-05 lb/hr	No
Anthracene	2.40E-06	<b>8.24E-10</b>	3.6E-09	9.1E-05 lb/hr	No
Benzo(a)anthracene	1.80E-06	<b>6.18E-10</b>	2.7E-09		See POM
Benzo(a)pyrene	1.20E-06	<b>4.12E-10</b>	1.8E-09	2.0E-06 lb/hr	See POM
Benzo(b)fluoranthene	1.80E-06	<b>6.18E-10</b>	2.7E-09		See POM
Benzo(g,h,i)perylene	1.20E-06	<b>4.12E-10</b>	1.8E-09	9.1E-05 lb/hr	No
Benzo(k)fluoranthene	1.80E-06	<b>6.18E-10</b>	2.7E-09		See POM
Chrysene	1.80E-06	<b>6.18E-10</b>	2.7E-09		See POM
Dibenzo(a,h)anthracene	1.20E-06	<b>4.12E-10</b>	1.8E-09		See POM
Fluoranthene	3.00E-06	<b>1.03E-09</b>	4.5E-09	9.1E-05 lb/hr	No
Fluorene	2.80E-06	<b>9.61E-10</b>	4.2E-09	9.1E-05 lb/hr	No
Indeno(1,2,3-cd)pyrene	1.80E-06	<b>6.18E-10</b>	2.7E-09		See POM
Naphthalene	6.10E-04	2.09E-07	9.2E-07	3.33 lb/hr	No
Phenanthrene	1.70E-05	<b>5.83E-09</b>	2.6E-08	9.1E-05 lb/hr	No
Pyrene	5.00E-06	<b>1.72E-09</b>	7.5E-09	9.1E-05 lb/hr	No
Polycyclic Org. Matter (POM, 7-PAH G)		<b>3.91E-09</b>	<b>1.7E-08</b>	2.0E-06 lb/hr	No
<b>Non-PAH HAPs</b>					
Benzene	2.10E-03	<b>7.21E-07</b>	3.2E-06	8.0E-04 lb/hr	No
Dichlorobenzene	1.20E-03	4.12E-07	1.8E-06	20 lb/hr	No
Formaldehyde	7.50E-02	<b>2.57E-05</b>	1.1E-04	5.1E-04 lb/hr	No
Hexane	1.80E+00	6.18E-04	2.7E-03	12 lb/hr	No
Toluene	3.40E-03	1.17E-06	5.1E-06	25 lb/hr	No
<b>Non-HAP Organic Compounds</b>					
Pentane	2.60E+00	8.92E-04	3.9E-03	118 lb/hr	No
<b>Metals (HAPs)</b>					
Arsenic	2.00E-04	<b>6.86E-08</b>	3.0E-07	1.5E-06 lb/hr	No
Barium	4.40E-03	1.51E-06	6.6E-06	0.033 lb/hr	No
Beryllium	1.20E-05	<b>4.12E-09</b>	1.8E-08	2.8E-05 lb/hr	No
Cadmium	1.10E-03	<b>3.77E-07</b>	1.7E-06	3.7E-06 lb/hr	No
Chromium	1.40E-03	4.80E-07	2.1E-06	0.033 lb/hr	No
Cobalt	8.40E-05	2.88E-08	1.3E-07	0.0033 lb/hr	No
Manganese	3.80E-04	1.30E-07	5.7E-07	0.067 lb/hr	No
Mercury	2.60E-04	8.92E-08	3.9E-07	0.003 lb/hr	No
Nickel	2.10E-03	<b>7.21E-07</b>	3.2E-06	2.7E-05 lb/hr	No
Selenium	2.40E-05	8.24E-09	3.6E-08	0.013 lb/hr	No
<b>Non-HAP Metals</b>					
Copper	8.50E-04	2.92E-07	1.3E-06	0.013 lb/hr	No
Molybdenum	1.10E-03	3.77E-07	1.7E-06	0.333 lb/hr	No
Vanadium	2.30E-03	7.89E-07	3.5E-06	0.003 lb/hr	No
Zinc	2.90E-02	9.95E-06	4.4E-05	0.667 lb/hr	No
<b>Total HAP Emissions (ton/yr) =</b>		<b>0.003</b>			

Notes:

- Emission factors taken from AP-42, Section 1.4 *Natural Gas Combustion* (7/98)
- HAPs lb/hr emissions that are not TAPs are annual averages.
- TAPs lb/hr emissions are 24-hour averages unless shown in bold. Bold emissions are annual averages for carcinogens.
- Booth Make-up Air heater is used only during cold weather, so actual on-line rating is significantly less.
- Polycyclic Organic Matter (POM) is considered as one TAP comprised of: benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, chrysene, indeno(1,2,3-cd)pyrene, benzo(a)pyrene. The total is compared to benzo(a)pyrene.