

CONSTRUCTION PERMIT APPLICATION

Construction Permit Application Example

BEST MACHINE MANUFACTURING
Business 123 Road
Spartanburg, SC 29301

Construction Permit Application Example

Table of Contents

1.0 SC DHEC BAQ Application Forms

Form D-2566

Form D-2567

Form D-2569

Form D-2570

Form D-2573

2.0 Emissions Spreadsheet & Supporting Calculations

- Standard IV Calculations
- Example Calculations
- Calculation Spreadsheet

3.0 Process Flow Diagram

4.0 Modeling

5.0 MSDS

Section 1.0 - SC DHEC BAQ Application Forms



**Bureau of Air Quality
Construction Permit Application
Facility Information
Page 1 of 2**

FACILITY IDENTIFICATION	
SC Air Permit Number (8-digits only) <i>(Leave blank if one has never been assigned)</i> -	Application Date December 29, 2014
Facility Name <i>(This should be the name used to identify the facility at the physical address listed below)</i> Best Machine Manufacturing	Facility Federal Tax Identification Number <i>(Established by the U.S. Internal Revenue Service to identify a business entity)</i> 12-3456789

FACILITY PHYSICAL ADDRESS		
Physical Address: Business 123 Road		County: Spartanburg
City: Spartanburg	State: SC	Zip Code: 29301
Facility Coordinates <i>(Facility coordinates should be based at the front door or main entrance of the facility.)</i>		
Latitude: 34.8860304	Longitude: -81.853958	<input type="checkbox"/> NAD27 <i>(North American Datum of 1927)</i> Or <input checked="" type="checkbox"/> NAD83 <i>(North American Datum of 1983)</i>

CO-LOCATION DETERMINATION	
Are there other facilities in close proximity that could be considered co-located? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes*	
List potential co-located facilities, including air permit numbers if applicable:	
<i>*If yes, please submit co-location applicability determination details in an attachment to this application.</i>	

COMMUNITY OUTREACH
What are the potential air issues and community concerns? Please provide a brief description of potential air issues and community concerns about the entire facility and/or specific project. Include how these issues and concerns are being addressed, if the community has been informed of the proposed construction project, and if so, how they have been informed.
None

FACILITY'S PRODUCTS / SERVICES	
Primary Products / Services <i>(List the primary product and/or service)</i> General Purpose Machinery Manufacturing	
Primary SIC Code <i>(Standard Industrial Classification Codes)</i> 3479	Primary NAICS Code <i>(North American Industry Classification System)</i> 347902
Other Products / Services <i>(List any other products and/or services)</i>	
Other SIC Code(s):	Other NAICS Code(s):

AIR PERMIT FACILITY CONTACT			
<i>(Person at the facility who can answer technical questions about the facility and permit application.)</i>			
Title/Position: Technical Manager	Salutation: Mr.	First Name: John	Last Name: Smith
Mailing Address: Business 123 Road			
City: Spartanburg	State: SC	Zip Code: 29301	
E-mail Address: john.smith@example.com	Phone No.: (864) 123-4567	Cell No.: 864-012-5678	
One hard copy of the signed permit will be mailed to the designated Air Permit Contact. If additional individuals need electronic copies of the permit, please provide their names and e-mail addresses.			
Name		E-mail Address	
Bob Smith, Environmental Associates		bob.smith@example.com	



**Bureau of Air Quality
Construction Permit Application
Facility Information
Page 2 of 2**

CONFIDENTIAL INFORMATION / DATA

Does this application contain [confidential information](#) or data? No Yes*

**If yes, include a sanitized version of the application for public review and ONLY ONE COPY OF CONFIDENTIAL INFORMATION SHOULD BE SUBMITTED*

LIST OF FORMS INCLUDED

(Identify all forms included in the application package)

Form Name	Included (Y/N)
Expedited Review Request (DHEC Form 2212)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Equipment/Processes (DHEC Form 2567)	<input checked="" type="checkbox"/> Yes
Emissions (DHEC Form 2569)	<input checked="" type="checkbox"/> Yes
Regulatory Review (DHEC Form 2570)	<input checked="" type="checkbox"/> Yes
Emissions Point Information (DHEC Form 2573)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If No, Explain)

OWNER OR OPERATOR

Title/Position: Technical Manager	Salutation: Mr.	First Name: John	Last Name: Smith
Mailing Address: Business 123 Road			
City: Spartanburg	State: SC	Zip Code: 29301	
E-mail Address: john.smith@example.com	Phone No.: (864) 123-4567	Cell No.:	

OWNER OR OPERATOR SIGNATURE

I certify, to the best of my knowledge and belief, that no applicable standards and/or regulations will be contravened or violated. I certify that any application form, report, or compliance certification submitted in this permit application is true, accurate, and complete based on information and belief formed after reasonable inquiry. I understand that any statements and/or descriptions, which are found to be incorrect, may result in the immediate revocation of any permit issued for this application.

John Smith

12/29/2014

Signature of Owner or Operator

Date

PERSON AND/OR FIRM THAT PREPARED THIS APPLICATION

(If not the same person as the Professional Engineer who has reviewed and signed this application.)

Consulting Firm Name:			
Title/Position:	Salutation: .	First Name:	Last Name:
Mailing Address:			
City:	State:	Zip Code:	
E-mail Address:	Phone No.:	Cell No.:	
SC Professional Engineer License/Registration No. (if applicable):			

PROFESSIONAL ENGINEER INFORMATION

Consulting Firm Name: Environmental Associates			
Title/Position: Project Engineer	Salutation: Mr.	First Name: Bob	Last Name: Smith
Mailing Address: P. O. Box 1234			
City: Greenville	State: SC	Zip Code: 29607	
E-mail Address: bob.smith@example.com	Phone No.: (864) 123-9876	Cell No.: 864-123-1111	
SC License/Registration No.: XXXXX			

PROFESSIONAL ENGINEER SIGNATURE

I have placed my signature and seal on the engineering documents submitted, signifying that I have reviewed this construction permit application as it pertains to the requirements of *South Carolina Regulation 61-62, Air Pollution Control Regulations and Standards.*

Bob Smith

12/29/2014

Signature of Professional Engineer

Date



**Bureau of Air Quality
Construction Permit Application
Equipment / Processes
Page 1 of 2**

APPLICATION IDENTIFICATION		
<i>(Please ensure that the information list in this table is the same on all of the forms and required information submitted in this construction permit application package.)</i>		
Facility Name <i>(This should be the name used to identify the facility)</i>	SC Air Permit Number (8-digits only) <i>(Leave blank if one has never been assigned)</i>	Application Date
Best Machine Manufacturing	-	12/29/2014

PROJECT DESCRIPTION
Brief Project Description (What, why, how, etc.): Best Machine Manufacturing (BMM) is a new metal painting and coating facility in Spartanburg, South Carolina. The facility paints various metal boxes according to their customer's specifications. BMM wishes to install a paint booth in its manufacturing facility. The booth is equipped with one (1) Binks 2100 conventional spray gun. Emissions from this area will be conveyed through a dry filter bank which will capture particulate matter. The expected pollutants from this process are PM, PM10, PM2.5, VOC, TAPs, and HAP. The facility will have the potential to emit over 100 TPY of VOCs, 10 TPY of a single HAP (Toluene), and 25 TPY of total HAP; however, the facility would like to take federally enforceable limits of less than 100 TPY of VOC, 10 TPY of a single HAP, and 25 TPY of total HAP to avoid Title V and MACT applicability.

ATTACHMENTS	
<input checked="" type="checkbox"/> Process Flow Diagram	Location in Application: Section 4.0
<input type="checkbox"/> Detailed Project Description	Location in Application:

EQUIPMENT / PROCESS INFORMATION							
Equipment ID Process ID	Action	Equipment / Process Description	Maximum Design Capacity (Units)	Control Device ID(s)	Pollutants Controlled (Include CAS#)	Capture System Efficiency and Description	Emission Point ID(s)
PB-01	<input checked="" type="checkbox"/> Add <input type="checkbox"/> Remove <input type="checkbox"/> Modify <input type="checkbox"/> Other	Paint Booth (Binks 2100 conventional spray gun, Model 98C-357)	Three 300 lb metal boxes per hour (Due to process bottleneck of 20 minutes process time per box)	FB-01	PM/PM10/PM2.5	100%; Closed System that ducts to the outside	PB01

CONTROL DEVICE INFORMATION					
Control Device ID	Action	Control Device Description	Maximum Design Capacity (Units)	Inherent/Required/Voluntary (Explain)	Destruction/Removal Efficiency Determination
FB-01	<input checked="" type="checkbox"/> Add <input type="checkbox"/> Remove <input type="checkbox"/> Modify <input type="checkbox"/> Other	Wall Filter Bank	150 fpm	Required	98.94% manufacture supplied removal efficiency; The filters will collect particle matter resulting from overspray



Bureau of Air Quality
Construction Permit Application
Equipment / Processes
Page 2 of 2

RAW MATERIAL AND PRODUCT INFORMATION			
Equipment ID Process ID Control Device ID	Raw Material(s)	Product(s)	Fuels Combusted
PB-01	Paint Metal Boxes	Painted Metal Boxes	None

MONITORING AND REPORTING INFORMATION					
Equipment ID Process ID Control Device ID	Pollutant(s)/Parameter(s) Monitored	Monitoring Frequency	Reporting Frequency	Monitoring/Reporting Basis	Averaging Period(s)
PB-01 FB-01	Filters	Daily Inspections	None	Daily Filter Inspections shall provide adequate information as to when the filters need to be cleaned and/or replaced	---
FB-01	Paint Usage; VOC, single greatest HAP, and total HAP emissions 12 month rolling sum	Daily/Monthly	Semi-Annual	Tracking daily paint usage shall provide the information needed to calculate the 12 month rolling sums which is used to demonstrate compliance with the Title V avoidance limits of less than 100 TPY of VOC, less than 10 TPY of a single HAP, and less than 25 TPY of total HAP emissions.	---



**Bureau of Air Quality
Construction Permit Application
Emissions
Page 1 of 3**

APPLICATION IDENTIFICATION

(Please ensure that the information list in this table is the same on all of the forms and required information submitted in this construction permit application package.)

Facility Name <i>(This should be the name used to identify the facility)</i>	SC Air Permit Number (8-digits only) <i>(Leave blank if one has never been assigned)</i>	Application Date
Best Maching Manufacturing	-	12/29/2014

ATTACHMENTS

(Check all the appropriate checkboxes if included as an attachment)

<input checked="" type="checkbox"/> Sample Calculations, Emission Factors Used, etc.	<input checked="" type="checkbox"/> Detailed Explanation of Assumptions, Bottlenecks, etc.
<input checked="" type="checkbox"/> Supporting Information: Manufacturer's Data, etc.	<input type="checkbox"/> Source Test Information
<input checked="" type="checkbox"/> Details on Limits Being Taken for Limited Emissions	<input type="checkbox"/> NSR Analysis

SUMMARY OF PROJECTED CHANGE IN FACILITY WIDE POTENTIAL EMISSIONS

(Calculated at maximum design capacity.)

Pollutants	Emission Rates Prior to Construction / Modification (tons/year)			Emission Rates After Construction / Modification (tons/year)		
	Uncontrolled	Controlled	Limited	Uncontrolled	Controlled	Limited
Particulate Matter (PM)	---	---	---	8.90	0.094	---
Particulate Matter <10 Microns (PM ₁₀)	---	---	---	8.90	0.094	---
Particulate Matter <2.5 Microns (PM _{2.5})	---	---	---	8.90	0.094	---
Sulfur Dioxide (SO ₂)	---	---	---	---	---	---
Nitrogen Oxides (NO _x)	---	---	---	---	---	---
Carbon Monoxide (CO)	---	---	---	---	---	---
Volatile Organic Compounds (VOC)	---	---	---	105.4	---	<100
Lead (Pb)	---	---	---	---	---	---
Highest HAP Prior to Construction (CAS #: N/A)	---	---	---	---	---	---
Highest HAP After Construction (CAS #: 108883)	---	---	---	26.1	---	<10.0
Total HAP Emissions*	---	---	---	38.0	---	<25.0

Include emissions from exempt equipment and emission increases from process changes that were exempt from construction permits.

(*All HAP emitted from the various equipment or processes must be listed in the appropriate "Potential Emission Rates at Maximum Design Capacity" Table)



Bureau of Air Quality
Construction Permit Application
Emissions
Page 2 of 3

POTENTIAL EMISSION RATES AT MAXIMUM DESIGN CAPACITY									
Equipment ID / Process ID	Emission Point ID	Pollutants (Include CAS #)	Calculation Methods / Limits Taken / Other Comments	Uncontrolled		Controlled		Limited	
				lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
PB-01	PB01	PM / PM10 / PM2.5	Material Balance Based on process operation, throughput, MSDS, transfer and control efficiencies. See Section 2.0 and 5.0 for more details.	2.03	8.90	0.022	0.094	---	---
PB-01	PB01	VOC	Material Balance Based on process operation, throughput, MSDS, transfer and control efficiencies. See Section 2.0 and 5.0 for more details.	24.1	105.4	---	---	---	<100.0
PB-01	PB01	Xylene 1330-20-7	Material Balance Based on process operation, throughput, MSDS, transfer and control efficiencies. See Section 2.0 and 5.0 for more details.	0.722	3.16	---	---	---	---
PB-01	PB01	MEK 78-93-3	Material Balance Based on process operation, throughput, MSDS, transfer and control efficiencies. See Section 2.0 and 5.0 for more details.	1.66	7.28	---	---	---	---
PB-01	PB01	Toluene 108-88-3 Single Greatest HAP	Material Balance Based on process operation, throughput, MSDS, transfer and control efficiencies. See Section 2.0 and 5.0 for more details.	5.97	26.1	---	---	---	<10.0
PB-01	PB01	Ethylbenzene 100-41-4	Material Balance Based on process operation, throughput, MSDS, transfer and control efficiencies. See Section 2.0 and 5.0 for more details.	0.146	0.638	---	---	---	---
PB-01	PB01	2-Butoxyethanol 111-76-2	Material Balance Based on process operation, throughput, MSDS, transfer and control efficiencies. See Section 2.0 and 5.0 for more details.	0.665	2.91	---	---	---	---
PB-01	PB01	Glycol Ethers	Material Balance Based on process operation, throughput, MSDS, transfer and control efficiencies. See Section 2.0 and 5.0 for more details.	0.765	3.35	---	---	---	---



Bureau of Air Quality
Construction Permit Application
Emissions
Page 3 of 3

POTENTIAL EMISSION RATES AT MAXIMUM DESIGN CAPACITY									
Equipment ID / Process ID	Emission Point ID	Pollutants (Include CAS #)	Calculation Methods / Limits Taken / Other Comments	Uncontrolled		Controlled		Limited	
				lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
PB-01	PB01	Methanol 67-56-1	Material Balance Based on process operation, throughput, MSDS, transfer and control efficiencies. See Section 2.0 and 5.0 for more details.	0.402	1.76	---	---	---	---
PB-01	PB01	Total HAP	Summation of Individual HAP. See Section 2.0 and 5.0 for more details.	8.67	38.0	---	---	---	<25.0



**Bureau of Air Quality
Construction Permit Application
Regulatory Review
Page 1 of 5**

APPLICATION IDENTIFICATION		
<i>(Please ensure that the information list in this table is the same on all of the forms and required information submitted in this construction permit application package.)</i>		
Facility Name <i>(This should be the name used to identify the facility)</i>	SC Air Permit Number (8-digits only) <i>(Leave blank if one has never been assigned)</i>	Application Date
Best Machine Manufacturing	-	12/29/2014

STATE AND FEDERAL AIR POLLUTION CONTROL REGULATIONS AND STANDARDS					
<i>(If not listed below add any additional regulations that are triggered.)</i>					
Regulation	Applicable		Include all limits, work practices, monitoring, record keeping, etc.		
	Yes	No	Explain Applicability Determination	List the specific limitations and/or requirements that apply.	How will compliance be demonstrated?
Regulation 61-62.1, Section II(E) Synthetic Minor Construction Permits	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Facility has the potential to emit above the major source thresholds for HAP and VOC for Title V and MACT applicability. However, it request federally enforceable limits to avoid being a Title V source.	Federally enforceable limit of less than 10 TPY of any single HAP, less than 25 TPY of total HAP, and less than 100 TPY of VOC.	12 month rolling sums based on paint usage and pollutant content of the paint shall be calculated to demonstrate compliance with the Title V and MACT avoidance limits.
Regulation 61-62.1, Section II(G) Conditional Major Operating Permits	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Facility has the potential to emit above the major source thresholds for HAP and VOC for Title V and MACT applicability. However, it request federally enforceable limits to avoid being a Title V source.	Federally enforceable limit of less than 10 TPY of any single HAP, less than 25 TPY of total HAP, and less than 100 TPY of VOC.	12 month rolling sums based on paint usage and pollutant content of the paint shall be calculated to demonstrate compliance with the Title V and MACT avoidance limits.
Regulation 61-62.5, Standard No. 1 Emissions from Fuel Burning Operations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No fuel burning operations are being installed.	---	---
Regulation 61-62.5, Standard No. 2 Ambient Air Quality Standards	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Facility emits NAAQS pollutants	Limits are outlined within the Standard for the NAAQS. See Section 4.0 for more details.	Modeling has been exempted for PM ₁₀ and PM _{2.5} because the controlled emissions are less than 1 lb/hr.
Regulation 61-62.5, Standard No. 3 Waste Combustion and Reduction	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No waste combustion sources are being installed.	---	---



**Bureau of Air Quality
Construction Permit Application
Regulatory Review
Page 2 of 5**

STATE AND FEDERAL AIR POLLUTION CONTROL REGULATIONS AND STANDARDS <i>(If not listed below add any additional regulations that are triggered.)</i>					
Regulation	Applicable		Include all limits, work practices, monitoring, record keeping, etc.		
	Yes	No	Explain Applicability Determination	List the specific limitations and/or requirements that apply.	How will compliance be demonstrated?
Regulation 61-62.5, Standard No. 4 Emissions from Process Industries	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The paint booth is subject to Sections VIII and IX.	Section VIII : The process weight rate of 0.456 tons/hr is based on a process bottleneck that only 3 parts can be processed in hour, Based on this process weight, the allowable PM emission rate is 2.43 lb/hr. See Section 2.0 for more details. The paint booth is also subject to Section IX and has an opacity limit of 20% because it is being constructed after December 31, 1985.	The uncontrolled emissions from the paint booth are 2.03 lb/hr which is less than the allowable PM emissions of this standard. Therefore, the paint booth can operate in compliance with this Standard.
Regulation 61-62.5, Standard No. 5 Volatile Organic Compounds	<input type="checkbox"/>	<input checked="" type="checkbox"/>	This Standard only applies to sources that existed in 1979 and 1980. This is a new source.	---	---
Regulation 61-62.5, Standard No. 5.2 Control of Oxides of Nitrogen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No fuel combustion sources are being installed.	---	---
Regulation 61-62.5, Standard No. 7 Prevention of Significant Deterioration*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Since the facility is not one of the 28 source categories listed in this standard, its PSD threshold is 250 TPY for each of the criteria pollutants. The potential emissions for each of the criteria pollutants for this facility are less than 250 TPY.	---	---
Regulation 61-62.5, Standard No. 7.1 Nonattainment New Source Review*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Facility is located in Spartanburg county, an attainment area.	---	---
Regulation 61-62.5, Standard No. 8 Toxic Air Pollutants	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Facility emits TAP	Limits are outlined within the standard for each TAP emitted. See Section 4.0 for more details.	Modeling was performed. See Section 4.0 for more details.



Bureau of Air Quality
Construction Permit Application
Regulatory Review
Page 3 of 5

STATE AND FEDERAL AIR POLLUTION CONTROL REGULATIONS AND STANDARDS					
<i>(If not listed below add any additional regulations that are triggered.)</i>					
Regulation	Applicable		Include all limits, work practices, monitoring, record keeping, etc.		
	Yes	No	Explain Applicability Determination	List the specific limitations and/or requirements that apply.	How will compliance be demonstrated?
Regulation 61-62.6 Control of Fugitive Particulate Matter	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The filter system captures the PM, PM ₁₀ , and PM _{2.5} emissions. Fugitive PM emissions are minimal because the roads are paved. The facility has no fugitive sources.	---	---
Regulation 61-62.68 Chemical Accident Prevention Provisions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No Chemicals regulated under 112r are stored onsite above thresholds.	---	---
Regulation 61-62.70 Title V Operating Permit Program	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Facility has the potential to emit above the major source thresholds for HAP and VOC for Title V. However, it request federally enforceable limits to avoid being a Title V source.	Federally enforceable limit of less than 10 TPY of any single HAP, less than 25 TPY of total HAP, and less than 100 TPY of VOC.	12 month rolling sums based on paint usage and pollutant content of the paint shall be calculated to demonstrate compliance with the Title V avoidance limits.
40 CFR Part 64 - Compliance Assurance Monitoring (CAM)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The facility is taking limits to avoid Title V and as such would not be subject to CAM.	---	---
40 CFR 60 Subpart A - General Provisions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The facility does not contain sources subject to this standard.	---	---
40 CFR 60 and SC Regulation 61-62.60 Subpart EE – Surface Coating of Metal Furniture	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The facility coats metal boxes, not metal furniture. Therefore, it is not subject to this Subpart.	---	---
40 CFR 60 and SC Regulation 61-62.60 Subpart MM – Automobile and Light Duty Truck Surface Coating Operations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The facility coats metal boxes, not automotive and light duty trucks. Therefore, it is not subject to this Subpart.	---	---
40 CFR 60 and SC Regulation 61-62.60 Subpart – TT Metal Coil Surface Coating	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The facility coats metal boxes, not metal coils. Therefore, it is not subject to this Subpart.	---	---
40 CFR 60 and SC Regulation 61-62.60 Subpart WW – Beverage Can Surface Coating Industry	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The facility coats metal boxes, not beverage cans. Therefore, it is not subject to this Subpart.	---	---
40 CFR 61 Subpart A - General Provisions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The facility does not emit the pollutants subject to this standard.	---	---



Bureau of Air Quality
Construction Permit Application
Regulatory Review
Page 4 of 5

STATE AND FEDERAL AIR POLLUTION CONTROL REGULATIONS AND STANDARDS					
<i>(If not listed below add any additional regulations that are triggered.)</i>					
Regulation	Applicable		Include all limits, work practices, monitoring, record keeping, etc.		
	Yes	No	Explain Applicability Determination	List the specific limitations and/or requirements that apply.	How will compliance be demonstrated?
40 CFR 63 Subpart A - General Provisions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The facility does not contain sources subject to this standard.	---	---
40 CFR 63 and SC Regulation 61-62.63 Subpart NNNN – Surface Coating of Large Appliances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The facility coats metal boxes, not large appliances. Therefore, it is not subject to this Subpart	---	---
40 CFR 63 and SC Regulation 61-62.63 Subpart RRRR – Surface Coating of Metal Furniture	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The facility coats metal boxes, not metal furniture. Therefore, it is not subject to this Subpart.	---	---
40 CFR 63 and SC Regulation 61-62.63 Subpart SSSS – Surface Coating of Metal Coil	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The facility coats metal boxes, not metal coil. Therefore, it is not subject to this Subpart.	---	---
40 CFR 63 and SC Regulation 61-62.63 Subpart KKKK – Surface Coating of Metal Cans	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The facility coats metal boxes, not metal cans. Therefore, it is not subject to this Subpart.	---	---
40 CFR 63 and SC Regulation 61-62.63 Subpart IIII - Surface Coating Of Automobiles and Light-Duty Trucks	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The facility coats metal boxes, not automotive and light-duty trucks. Therefore, it is not subject to this Subpart.	---	---
40 CFR 63 and 61-62.63 Subpart MMMM - Surface Coating Of Miscellaneous Metal Parts And Products	<input type="checkbox"/>	<input checked="" type="checkbox"/>	This facility operates under NAICS code 347902 which is not one of the NAICS codes listed in this Subpart. Additionally, the facility is requesting federally enforceable limits to not be a major source. This Subpart only applies to major sources. Therefore, it is not subject to this Subpart.	---	---



Bureau of Air Quality
Construction Permit Application
Regulatory Review
Page 5 of 5

STATE AND FEDERAL AIR POLLUTION CONTROL REGULATIONS AND STANDARDS					
<i>(If not listed below add any additional regulations that are triggered.)</i>					
Regulation	Applicable		Include all limits, work practices, monitoring, record keeping, etc.		
	Yes	No	Explain Applicability Determination	List the specific limitations and/or requirements that apply.	How will compliance be demonstrated?
40 CFR 63 and 61-62.63 Subpart HHHHHH - Paint Stripping And Miscellaneous Surface Coating Operations At Area Sources	<input type="checkbox"/>	<input checked="" type="checkbox"/>	This Subpart applies to area source facilities that conduct various paint stripping and miscellaneous surface coating operations defined in 40CFR63.11169. This facility does not currently or propose to perform paint stripping activities, is not an auto body refinishing operation and does not currently or propose to spray apply coatings containing the target HAP. Therefore, it is not subject to this Subpart.	---	---
40 CFR 63 and 61-62.63 Subpart XXXXXX - Nine Metal Fabrication And Finishing Source Categories	<input type="checkbox"/>	<input checked="" type="checkbox"/>	This Subpart applies to area source facilities that conduct metal fabrication and finishing. The facility does not conduct metal fabrication. Therefore, it is not subject to this Subpart.	---	---
Section 112g	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Facility has the potential to emit above the major source thresholds for HAP. However, it request federally enforceable limits to avoid being a subject to 112g.	Federally enforceable limit of less than 10 TPY of any single HAP and less than 25 TPY of total HAP.	12 month rolling sums based on paint usage and pollutant content of the paint shall be calculated to demonstrate compliance with the avoidance limits.

* Green House Gas emissions must be quantified if these regulations are triggered.



**Bureau of Air Quality
Emission Point Information
Page 1 of 4**

A. APPLICATION IDENTIFICATION

1. Facility Name: Best Machine Manufacturing	
2. SC Air Permit Number (if known; 8-digits only): -	3. Application Date: 12/29/2014
4. Project Description: Best Machine Manufacturing (BMM) is a new metal painting and coating facility in Spartanburg, South Carolina. The facility paints various metal boxes and is proposing the installation of a Binks 2100 paint booth with a conventional spray gun. The expected pollutants are PM10, PM2.5 and TAPs. The facility will have the potential to emit over 100 TPY of VOCs, 10 TPY of a single HAP (Standard 8 [TAP] Toluene). The facility would like to take a federally enforceable limits of less than 100 TPY of VOC, 10 TPY of a single HAP and 25 TPY of total HAPs to avoid Title V applicability.	

B. FACILITY INFORMATION

1. Is your company a Small Business? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2. If a Small Business or small government facility, is Bureau assistance being requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
3. Are other facilities collocated for air compliance? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	4. If Yes, provide permit numbers of collocated facilities: N/A

C. AIR CONTACT

Consulting Firm Name (if applicable): Environmental Associates			
Title/Position: Project Engineer	Salutation: Mr.	First Name: Robert (Bob)	Last Name: Smith
Mailing Address: PO Box 1234			
City: Spartanburg		State: South Carolina	Zip Code: 29607
E-mail Address: Bob.Smith@Example.com		Phone No.: 864-123-9876	Cell No.: 864-123-1111

D. EMISSION POINT DISPERSION PARAMETERS

Source data requirements are based on the appropriate source classification. Each emission point is classified as a point, area, volume, or flare source. Contact the Bureau of Air Quality for clarification of data requirements. Include sources on a scaled site map. Also, a picture of area or volume sources would be helpful but is not required. A user generated document or spreadsheet may be substituted in lieu of this form provided all of the required emission point parameters are submitted in the same order, units, etc. as presented in these tables.

Abbreviations / Units of Measure: UTM = Universal Transverse Mercator; °N = Degrees North; °W = Degrees West; m = meters; AGL = Above Ground Level; ft = feet; ft/s = feet per second; ° = Degrees; °F = Degrees Fahrenheit



Bureau of Air Quality
Emission Point Information
 Page 2 of 4

E. POINT SOURCE DATA

(Point sources such as stacks, chimneys, exhaust fans, and vents.)

Emission Point ID	Description/Name	Point Source Coordinates Projection: NAD83				Release Height AGL (ft)	Temp. (°F)	Exit Velocity (ft/s)	Inside Diameter (ft)	Discharge Orientation	Rain Cap? (Y/N)	Distance To Nearest Property Boundary (ft)	Building		
		UTM E (m)	UTM N (m)	Lat (°N)	Long (°W)								Height (ft)	Length (ft)	Width (ft)
PB01	Paint Booth	421966	3860737	---	---	29.75	72	39.79	4.00	Vertical	Yes	350	22	270	225

F. AREA SOURCE DATA

(Area sources such as storage piles, and other sources that have low level or ground level releases with no plumes.)

Emission Point ID	Description/Name	Area Source Coordinates Projection:				Release Height AGL (ft)	Easterly Length (ft)	Northerly Length (ft)	Angle From North (°)	Distance To Nearest Property Boundary (ft)
		UTM E (m)	UTM N (m)	Lat (°N)	Long (°W)					

G. VOLUME SOURCE DATA

(Volume sources such as building fugitives that have initial dispersion vertical depth prior to release.)

Emission Point ID	Description/Name	Volume Source Coordinates Projection:				Release Height AGL (ft)	Initial Horizontal Dimension (ft)	Initial Vertical Dimension (ft)	Distance To Nearest Property Boundary (ft)
		UTM E (m)	UTM N (m)	Lat (°N)	Long (°W)				



**Bureau of Air Quality
Emission Point Information
Page 3 of 4**

H. FLARE SOURCE DATA

(Point sources where the combustion takes place at the tip of the stack.)

Emission Point ID	Description/Name	Flare Source Coordinates Projection:				Release Height AGL (ft)	Heat Release Rate (BTU/hr)	Distance To Nearest Property Boundary (ft)	Building		
		UTM E (m)	UTM N (m)	Lat (°N)	Long (°W)				Height (ft)	Length (ft)	Width (ft)

I. AREA CIRCULAR SOURCE DATA

Emission Point ID	Description/Name	Area Circular Source Coordinates Projection:				Release Height AGL (ft)	Radius of Area (ft)	Distance To Nearest Property Boundary (ft)
		UTM E (m)	UTM N (m)	Lat (°N)	Long (°W)			

J. AREA POLY SOURCE DATA

Emission Point ID	Description/Name	Area Poly Source Coordinates Projection:		Release Height AGL (ft)	Number of Vertices
		UTM E (m)	UTM N (m)		

K. OPEN PIT SOURCE DATA

Emission Point ID	Description/Name	Open Pit Source Coordinates Projection:		Release Height AGL (ft)	Easterly Length (ft)	Northerly Length (ft)	Volume (ft ³)	Angle From North (°)
		UTM E (m)	UTM N (m)					



Bureau of Air Quality
Emission Point Information
 Page 4 of 4

L. EMISSION RATES

Emission Point ID	Pollutant Name	CAS #	Emission Rate (lb/hr)	Same as Permitted ⁽¹⁾	Controlled or Uncontrolled	Averaging Period
PB01	PM10	N/A	0.022	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Controlled	
PB01	PM2.5	N/A	0.022	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Controlled	
PB01	Ethyl Benzene	100-41-4	0.146	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Uncontrolled	
PB01	Glycol Ethers	N/A	0.765	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Uncontrolled	
PB01	Methanol	67-56-1	0.402	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Uncontrolled	
PB01	Methyl Ethyl Ketone	108-10-1	1.660	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Uncontrolled	
PB01	Toluene	108-88-3	5.970	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Uncontrolled	
PB01	Xylene (Isomers and Mixture)	1330-20-7	0.722	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Uncontrolled	

(1) Any difference between the rates used for permitting and the air compliance demonstration must be explained in the application report.

Section 2.0 – Emission Spreadsheet and Supporting Calculations

Emissions Calculations

Standard No.4 Calculation

S.C. Regulation 61 62.5, Standard No. 4, Section VIII

Particulate matter emissions shall be limited to the rate specified by use of the following equations:

For process weight rates less than or equal to 30 tons per hour

$$E = (F) 4.10P^{0.67}$$

Where

E = the allowable emission rate in pounds per hour

P = process weight rate in tons per hour

F = effect factor (from Table B in S.C. Regulation 61-62.5, Standard No. 4)

Spray Booth (Unit ID-01) -Standard IV PM Limit

The booth will have a maximum capacity to process one (1) metal box per 20 minutes while applying a maximum of 0.5 gallon of coating per box. The weight of each part will be approximately 300 pounds. With these assumptions and givens, PM emissions limit set forth in S.C. Regulation 61-62.5 Standard 4 will be:

Given:

- Process Time - 20 minute per metal box; therefore, 3 boxes can be processed in an hour
- Part Weight – 300 pounds
- Product Usage – 0.5 gallons of coating per metal box
- Product Weight – 7.47 pounds per gallon (The facility uses 3 different products. The maximum product weight from the 3 products was used)
- F=1

$$P \left(\frac{\text{tons}}{\text{hour}} \right) = \left\langle \left\{ \left(\frac{300 \text{ pound}}{\text{part}} \right) + \left[\left(\frac{0.5 \text{ gallon}}{\text{part}} \right) \times \left(\frac{7.47 \text{ poound}}{\text{gallon}} \right) \right] \right\} \times \left(\frac{3 \text{ part}}{\text{hour}} \right) \right\rangle \times \left(\frac{1 \text{ ton}}{2000 \text{ pound}} \right) = 0.456$$

$$E\left(\frac{\text{pound}}{\text{hour}}\right) = F \times 4.1P^{0.67} = 1 \times 4.1 \times (0.456^{0.67}) = 2.42$$

The uncontrolled emissions from the paint booth are 2.03 pounds per hour. This is less than the allowable limit of 2.42 pounds per hour. Therefore, the paint booth can operate in compliance with this Standard.

Calculating Emissions from the Painting Operation

Example Equations Used for Calculating Paint Emissions:

$$\text{VOC}\left(\frac{\text{pound}}{\text{hour}}\right) = \text{Pollutant Content}\left(\frac{\text{pound}}{\text{gallon}}\right) \times \text{Usage}\left(\frac{\text{gallon}}{\text{minute}}\right) \times \left(\frac{60 \text{ minute}}{\text{hour}}\right)$$

$$\text{HAP}\left(\frac{\text{pound}}{\text{hour}}\right) = \text{Product Weight}\left(\frac{\text{pound}}{\text{gallon}}\right) \times \text{Pollutant Content (\%)} \times \text{Usage}\left(\frac{\text{gallon}}{\text{minute}}\right) \times \left(\frac{60 \text{ minute}}{\text{hour}}\right)$$

$$\text{Uncontrolled PM}\left(\frac{\text{pound}}{\text{hour}}\right) = \left[\text{Product Weight}\left(\frac{\text{pound}}{\text{gallon}}\right) - \text{VOC Pollutant Content}\left(\frac{\text{pound}}{\text{gallon}}\right) \right] \times \text{Usage}\left(\frac{\text{gallon}}{\text{minute}}\right) \times [1 - \text{Transfer Efficiency (\%)}]$$

$$\text{Controlled PM}\left(\frac{\text{pound}}{\text{hour}}\right) = \text{Uncontrolled PM}\left(\frac{\text{pound}}{\text{gallon}}\right) \times [1 - \text{Control Efficiency (\%)}]$$

$$\text{Pollutant}\left(\frac{\text{ton}}{\text{year}}\right) = \text{Pollutant}\left(\frac{\text{pound}}{\text{hour}}\right) \times \left(\frac{8760 \text{ hour}}{\text{year}}\right) \times \left(\frac{\text{ton}}{2000 \text{ pound}}\right)$$

Example Emissions Calculation for each pollutant (VOC, HAP, PM) for HC Black Splatter Paint:

VOCs (lb/hr) for Paint HC Black Splatter:

Given:

- Pollutant content for VOCs: 5.36 lb/gal

- Usage: 0.5 gallons of paint used in 20 minutes (based on processing and drying times)

$$\text{VOC} \left(\frac{\text{pound}}{\text{hour}} \right) = \left(\frac{5.36 \text{ pound}}{\text{gallon}} \right) \times \left(\frac{0.5 \text{ gallon}}{20 \text{ minute}} \right) \times \left(\frac{60 \text{ minute}}{\text{hour}} \right) = 8.04$$

HAP (lb/hr) for Paint HC Black Splatter:

Given:

- Product Weight: 7.3 lb/gal
- Usage: 0.5 gallons of paint used in 20 minutes (based on processing and drying times)
- Pollutants Content: As provided on the MSDS

$$\text{MEK [T, V]} \left(\frac{\text{pound}}{\text{hour}} \right) = \left(\frac{7.3 \text{ pound}}{\text{gallon}} \right) \times 7\% \times \left(\frac{0.5 \text{ gallon}}{20 \text{ minute}} \right) \times \left(\frac{60 \text{ minute}}{\text{hour}} \right) = 0.77$$

$$\text{Toluene [H, T, V]} \left(\frac{\text{pound}}{\text{hour}} \right) = \left(\frac{7.3 \text{ pound}}{\text{gallon}} \right) \times 14\% \times \left(\frac{0.5 \text{ gallon}}{20 \text{ minute}} \right) \times \left(\frac{60 \text{ minute}}{\text{hour}} \right) = 1.53$$

$$\text{Ethylbenzene [H, T, V]} \left(\frac{\text{pound}}{\text{hour}} \right) = \left(\frac{7.3 \text{ pound}}{\text{gallon}} \right) \times 0.3\% \times \left(\frac{0.5 \text{ gallon}}{20 \text{ minute}} \right) \times \left(\frac{60 \text{ minute}}{\text{hour}} \right) = 0.033$$

$$\text{2 – Butoxyethanol [T, V]} \left(\frac{\text{pound}}{\text{hour}} \right) = \left(\frac{7.3 \text{ pound}}{\text{gallon}} \right) \times 3\% \times \left(\frac{0.5 \text{ gallon}}{20 \text{ minute}} \right) \times \left(\frac{60 \text{ minute}}{\text{hour}} \right) = 0.33$$

$$\text{Glycol Ether [H, T, V]} \left(\frac{\text{pound}}{\text{hour}} \right) = \left(\frac{7.3 \text{ pound}}{\text{gallon}} \right) \times 3\% \times \left(\frac{0.5 \text{ gallon}}{20 \text{ minute}} \right) \times \left(\frac{60 \text{ minute}}{\text{hour}} \right) = 0.33$$

$$\text{Xylene [H, T, V]} \left(\frac{\text{pound}}{\text{hour}} \right) = \left(\frac{7.3 \text{ pound}}{\text{gallon}} \right) \times 2\% \times \left(\frac{0.5 \text{ gallon}}{20 \text{ minute}} \right) \times \left(\frac{60 \text{ minute}}{\text{hour}} \right) = 0.22$$

PM, PM10, and PM2.5 (lb/hr) for Paint HC Black Splatter:

Given:

- Product Weight: 7.3 lb/gal
- Pollutant content for VOCs: 5.36 lb/gal
- Usage: 0.5 gallons of paint used in 20 minutes (based on processing and drying times)
- The HVLP transfer efficiency is 75%, meaning 25% is considered overspray was assumed because the coating material will be applied to a flat, solid surface.
- The paint booth is equipped with a dry filter control device with a control efficiency of 98.94% is based on manufactures test data.

$$\text{Uncontrolled PM / PM}_{10} / \text{PM}_{2.5} \left(\frac{\text{pound}}{\text{hour}} \right) = \left[\left(\frac{7.3 \text{ pound}}{\text{gallon}} \right) - \left(\frac{5.36 \text{ pound}}{\text{gallon}} \right) \right] \times \left(\frac{0.5 \text{ gallon}}{20 \text{ minute}} \right) \times \left(\frac{60 \text{ minute}}{\text{hour}} \right) \times [1 - 75\%]$$

$$\text{Uncontrolled PM / PM}_{10} / \text{PM}_{2.5} \left(\frac{\text{pound}}{\text{hour}} \right) = \left(\frac{1.94 \text{ pound}}{\text{gallon}} \right) \times \left(\frac{0.5 \text{ gallon}}{20 \text{ minute}} \right) \times \left(\frac{60 \text{ minute}}{\text{hour}} \right) \times (25\%) = 0.73$$

$$\text{Controlled PM / PM}_{10} / \text{PM}_{2.5} \left(\frac{\text{pound}}{\text{hour}} \right) = \left(\frac{0.73 \text{ pound}}{\text{gallon}} \right) \times [1 - 98.94\%] = 0.0077$$

Refer to the spreadsheet below for all calculations used in determining the facility wide potential to emit.

HC Black Splatter (Product Number L61XXB5989-2223)							Uncontrolled		Controlled	
Pollutant	Product Weight (lb/gal)	Pollutant Content	Usage (Gal/min)	Transfer Efficiency (%)	Control Efficiency (%)	lb/hr	TPY (8,760 hr/yr)	lb/hr	TPY (8,760 hr/yr)	
VOC (total)	7.3	5.36 lb/gal	0.025	--	--	8.04	35.22	--	--	
Xylene (H,T,V)	7.3	2 %	0.025	--	--	2.19E-01	9.59E-01	--	--	
MEK (T,V)	7.3	7 %	0.025	--	--	7.67E-01	3.36	--	--	
Toluene (H,T,V)	7.3	14 %	0.025	--	--	1.53	6.71	--	--	
Ethylbenzene (H,T,V)	7.3	0.3 %	0.025	--	--	3.29E-02	1.44E-01	--	--	
2-Butoxyethanol (T,V)	7.3	3 %	0.025	--	--	3.29E-01	1.44	--	--	
Glycol Ethers (H,T,V)	7.3	3 %	0.025	--	--	3.29E-01	1.44	--	--	
PM/PM10/PM2.5	7.3	1.94 lb/gal	0.025	75	98.94	7.28E-01	3.19	7.71E-03	3.38E-02	

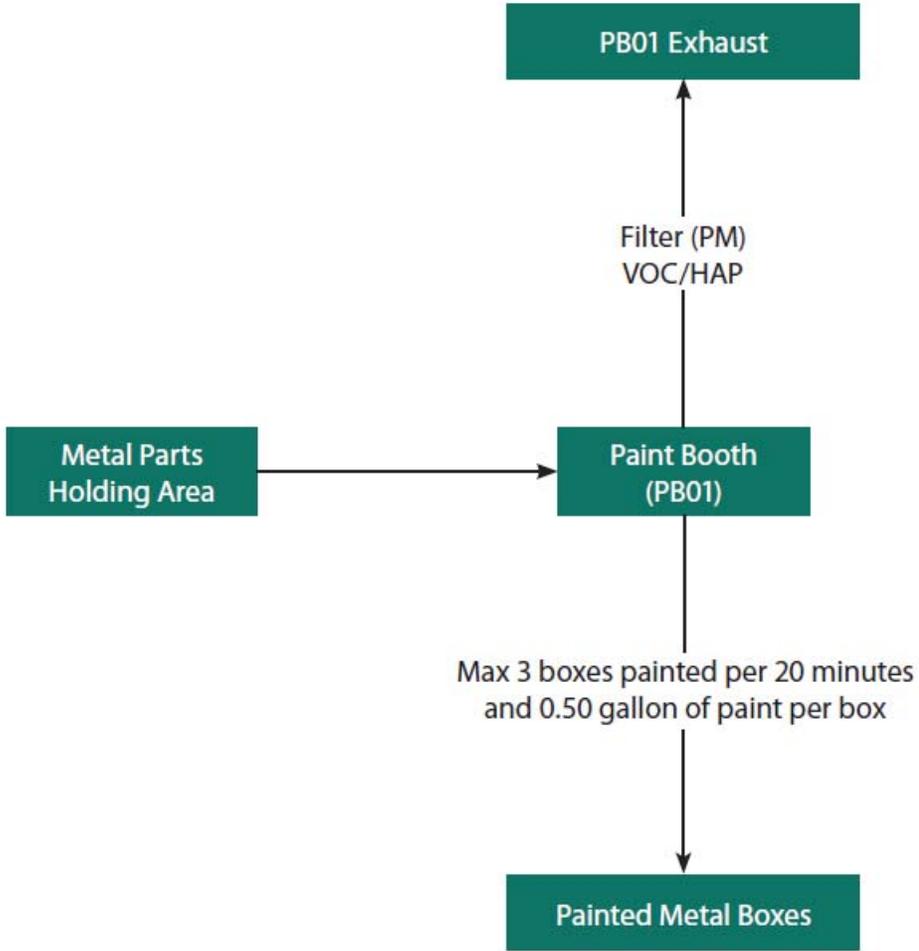
Flat Black Lacquer (Product Number M60B8)							Uncontrolled		Controlled	
Pollutant	Product Weight (lb/gal)	Pollutant Content	Usage (Gal/min)	Transfer Efficiency (%)	Control Efficiency (%)	lb/hr	TPY (8,760 hr/yr)	lb/hr	TPY (8,760 hr/yr)	
VOC (total)	7.47	5.39 lb/gal	0.025	--	--	8.09	35.41	--	--	
MEK (T,V)	7.47	8 %	0.025	--	--	8.96E-01	3.93	--	--	
Toluene (H,T,V)	7.47	10 %	0.025	--	--	1.12	4.91	--	--	
Ethylbenzene (H,T,V)	7.47	0.2 %	0.025	--	--	2.24E-02	9.82E-02	--	--	
2-Butoxyethanol (T,V)	7.47	3 %	0.025	--	--	3.36E-01	1.47	--	--	
Glycol Ethers (H,T,V)	7.47	3 %	0.025	--	--	3.36E-01	1.47	--	--	
PM/PM10/PM2.5	7.47	2.08 lb/gal	0.025	75	98.94	7.80E-01	3.42	8.27E-03	3.62E-02	

Lacquer Thinner (Product Number K119-SW)							Uncontrolled		Controlled	
Pollutant	Product Weight (lb/gal)	Pollutant Content	Usage (Gal/min)	Transfer Efficiency (%)	Control Efficiency (%)	lb/hr	TPY (8,760 hr/yr)	lb/hr	TPY (8,760 hr/yr)	
VOC (total)	6.70	5.3 lb/gal	0.025	--	--	7.95	34.82	--	--	
Toluene (H,T,V)	6.70	33 %	0.025	--	--	3.32	14.53	--	--	
Ethylbenzene (H,T,V)	6.70	0.9 %	0.025	--	--	9.05E-02	3.96E-01	--	--	
Xylene (H,T,V)	6.70	5 %	0.025	--	--	5.03E-01	2.20	--	--	
Methanol (H,T,V)	6.70	4 %	0.025	--	--	4.02E-01	1.76	--	--	
Glycol Ethers (H,T,V)	6.70	1 %	0.025	--	--	1.01E-01	4.40E-01	--	--	
PM/PM10/PM2.5	6.70	1.4 lb/gal	0.025	75	98.94	5.25E-01	2.30	5.57E-03	2.44E-02	

Pollutant	Uncontrolled (lb/hr)	Uncontrolled (TPY)	Controlled (lb/hr)	Controlled (TPY)	Limited (TPY)
PM/PM10/PM2.5	2.03	8.90	0.0215445	0.09436491	
VOC (total)	24.08	105.4485	--	--	<100
Xylene (H,T,V)	7.22E-01	3.16017	--	--	
MEK (T,V)	1.66	7.283502	--	--	
Toluene (H,T,V)	5.97	26.1486	--	--	
Ethylbenzene (H,T,V)	1.46E-01	0.6382098	--	--	
2-Butoxyethanol (T,V)	6.65E-01	2.911167	--	--	
Glycol Ethers (H,T,V)	7.65E-01	3.351357	--	--	
Methanol (H,T,V)	4.02E-01	1.76076	--	--	
HAP (Toluene, single greatest)	5.97	26.1486	--	--	<10
HAP (total)	8.67	37.9702638	--	--	<25

Section 3.0 – Process Flow Diagram

Process Flow Diagram



Section 4.0 - Modeling

Air Dispersion Modeling Analysis

Introduction

BMM (BMM) is metal fabrication facility in Spartanburg, South Carolina. BMM manufactures various pieces of machinery according to their customer's specifications. In this application, the facility would like to include a paint booth in its air operating permit.

Expected criteria pollutant emissions from this process include PM₁₀ and PM_{2.5}. Several Standard 8 toxic pollutants will also be emitted from the new paint booth. For additional information regarding Air Dispersion Modeling refer to the website below: (<http://www.dhec.sc.gov/Environment/AirQuality/ComplianceandReporting/AirDispersionModeling/FormsGuidelinesSoftware/>)

For a detailed D-2573 Emission Point Information form see Section 1.

Equipment Description

The Spray Coating Operation (Unit ID PB-01) is a manual process that will use one (1) conventional spray gun which will be used to apply various coatings to the metal productions. Each item will require at least a 20 minute process time which will include setup, coating and drying. There is 98.94% control efficiency for the dry filter control device (controls criteria pollutant emissions only).

Modeling Applicability

Air Pollution Control Regulations and Standards, R. 61-62.5 Standard No. 2-Ambient Air Quality Standards: As part of the air permitting process, facilities in South Carolina are required to demonstrate that the emissions coming from their sources will not cause the violation of any applicable South Carolina pollution control regulations or standards.

BMM only emits PM₁₀ and PM_{2.5} criteria pollutant emissions at rates less than 1.0 lb/hr and is therefore exempt from air dispersion modeling for Standard No. 2.

Air Pollution Control Regulations and Standards, R. 61-62.5 Standard No. 7-Prevention of Significant Deterioration: Source Impact Analysis: The requirements of this regulation apply to the construction of any new major stationary source or any project at an existing major stationary source in an area designated as attainment or unclassified.

BMM will be classified as a true minor source with respect to PM₁₀ and PM_{2.5}, it is not subject to the major source provisions for this standard. However, the minor source baseline date (msbd) for PM₁₀ has been triggered in Spartanburg County

(12/21/1992). Therefore, Standard No. 7 increment consumption must be addressed for the PM₁₀ emissions increases. The PM₁₀ emissions are emitted at a rate less than 1.0 lb/hr and are therefore exempt from air dispersion modeling. Since, the PM_{2.5} minor source baseline date has not been triggered for Spartanburg County, the PM_{2.5} emissions are not subject to Standard No. 7.

Air Pollution Control Regulations and Standards, R. 61-62.5-Standard No. 8-Toxic Air Pollutants: The requirements for this regulation apply to all toxic air pollutants listed in Standard No. 8.

An AERMOD modeling analysis was completed for toluene emissions. All other toxic pollutants from BMM are emitted at rates less than de minimis levels as listed in Appendix D of the Air Quality Modeling Guidelines and are not required to further demonstrate compliance with Standard No. 8. Refer to the modeling results and de minimis analysis below.

Modeling Results

STANDARD NO. 8 - TOXIC AIR POLLUTANTS ANALYSIS					
Pollutant	CAS Number	Basis	Maximum Concentration (µg/m³)⁽¹⁾	Standard (µg/m³)	% Of Standard
Toluene	108-88-3	AERMOD	300.81	2000.00	15
1) Concentrations are rounded to two decimal places to compare to the standards.					

Level I De Minimis Analysis

STANDARD NO. 8 - TOXIC AIR POLLUTANTS ANALYSIS					
Pollutant	CAS Number	Emission Rate (lb/hr)	Emission Rate (lb/day)	De Minimis (lb/day)	Modeling Required?
Ethyl Benzene	100-41-4	0.146	3.504	52.200	No
Glycol Ethers	N/A	0.765	18.360	+	No
Methanol	67-56-1	0.402	9.648	15.720	No
Methyl Ethyl Ketone	108-10-1	1.660	39.840	177.000	No
Toluene	108-88-3	5.970	143.280	24.000	Yes ⁽¹⁾
Xylene	1330-20-7	0.722	17.328	52.200	No

1) An AERMOD modeling demonstration was completed for Standard 8, toxic pollutant, toluene. Please see attached modeling results.

***Concentrations are rounded to two decimal places to compare to the standards.**

****All emissions are from the Paint Booth (PB01)**

+A standard has not been established for this pollutant. As a result, the emissions are assumed to be de minimis and are not required to be modeled.

Modeling Considerations:

Types of Models: The first approach for any modeling analysis is to determine if modeling is going to be required. Criteria pollutant PM₁₀, PM_{2.5}, NO_x and SO₂ emissions less than 1.0 lb/hr are exempt from modeling. CO, criteria pollutant emissions, less than 10 lbs/hr are exempt from modeling requirements. Lead, criteria pollutant emissions, less than 0.114 lbs/hr are exempt from modeling. Standard 8, toxic pollutant emissions, under the de minimis thresholds are only required to be listed and a de minimis analysis completed (lbs/day).

If any pollutants are above the exemption or de minimis levels a modeling analysis will be required. Screening models are the most simple air dispersion models and require fewer resources to use than more refined models. AERSCREEN is the current EPA recommended screening model based on the current EPA recommended refined model, AERMOD. SC DHEC also accepts the use of SCREEN3, which is the EPA screening version of the ISC3 model. If the pollutants are not passing modeling after performing screening modeling, the next approach would be to perform more refined modeling with AERMOD using the regulatory defaults.

Good Engineering Practice (GEP) Stack Height Analysis: The proper stack height is very important to achieving good dispersion of air pollutants. If the stack is too low, the air pollutants that are released are trapped in the wake of nearby obstructions (structures or terrain features) and are also brought down to ground level in the immediate vicinity of the release point (down-wash). If the facility is modeled using SCREEN3, building information must be included in the model for point sources that are less than GEP (Good Engineering Practice) stack height, which is defined by the equation:

$$H_{\text{gep}} = H + 1.5L$$

Where:

H_{gep} = GEP stack height

H = Height above stack base of adjacent structure or nearby structure

L = Lesser Dimension (height or projected width of nearby structures)

A GEP analysis should be conducted for all structures within $5 L$ of each stack. Identify the structure that results in the largest GEP stack height for each stack as the critical structure for that stack.

Note: It may be necessary to run SCREEN3 several times in order to determine the building that has the worst influence on the stack(s) being modeled. Also, terrain features that are located within $5 L$ can cause wake effects and should be considered on a case-by-case basis.

For modeling using AERSCREEN or AERMOD, the BPIP-Prime program must be used to incorporate downwash effects of buildings, tanks, and sources.

Any off-site structures that may produce a downwash effect should be included.

If the modeling project was divided into different runs (per pollutant, for example), all of the buildings should be included in a comprehensive run of BPIP-Prime, and the output of that run used in each of the individual AERMOD analyses.

BMM has an exhaust stack height that is 29.75 feet. See image below for an aerial view of the facility. The location of this exhaust stack and building that was included in the BPIP-Prime analysis for downwash, can be seen in the aerial view of the facility.



Aerial View of Facility

Horizontal Discharges and Rain Caps: The exit velocity of the emissions exhaust in the vertical (upward) direction is a required input for the model. Many stacks have non-vertical discharges (horizontal or downward) or have rain caps that change the outlet velocity from vertical to horizontal. To model these stacks properly, use a vertical velocity of 0.01 m/sec in SCREEN3 or 0.001 m/sec in AERMOD. If the stack is a vertical, uncapped stack, use the actual exit velocity in the model.

BMM has a vertical stack with a raincap. The actual velocity is 39.79 ft/sec (as listed on Form D-2573, Section 1.0); however, the velocity used in the modeling analysis was 0.001 m/sec (or 0.00328 ft/sec).

Rural/Urban Classification: The procedure to determine whether to use urban or rural dispersion coefficients is found in the EPA's Guideline on Air Quality Models (Revised) dated July 1986, EPA-450/2-78-027R. This document lists two methods that can be used to determine the proper classification.

(1) Land Use Procedure - If more than 50% of the land within a 3 kilometer radius of the facility in question is of land use type heavy or medium industrial, commercial or multi-family residential then the Urban mode should be selected. Otherwise, use the Rural mode.

(2) Population Density Procedure - If the population density within a 3-kilometer radius of the facility is greater than 750 people per square kilometer, then the Urban mode should be selected. Otherwise the Rural mode should be selected.

Most areas in South Carolina will classify as rural using these procedures. Typically, an area that meets the urban criteria will be located near the core of one of the larger metropolitan areas

BMM is located in a rural area of Spartanburg County, South Carolina. Therefore, the rural dispersion option was selected.

Terrain:

Complex Terrain: Complex Terrain is defined as terrain that exceeds the top of the stacks for the sources being modeled. In complex terrain, the plume height is lower than the nearby terrain.

Intermediate Terrain: Intermediate terrain is defined as terrain that exceeds the top of the stacks for the sources being modeled but does not exceed the plume height. Intermediate terrain may be modeled with both simple and complex terrain models on an hour-by-hour basis, and the higher of the two predictions chosen to represent the most conservative estimate for that hour. The SCREEN, AERSCREEN, and AERMOD models determine which calculation is higher when intermediate terrain is encountered.

BMM is located in a part of South Carolina where terrain is required to be considered. Digital terrain data has been included in the AERMOD modeling analysis for Toluene. The data was imported via AERMAP. AERMAP was run prior to BPIP-Prime and AERMOD. The projection datum is NAD83 and was verified using Graphical Imaging Software. Refer to the aerial view of facility.

Receptor Grid: The receptor grid placement is important in determining the maximum impact from a source. The grid should be placed so that the maximum concentration off plant property can be determined. It is recommended that discrete receptors be placed along the property line at 50-meter maximum spacing and 100 meter grid spacing beyond the property boundary. Discrete receptors should also be placed along property not owned by the facility that crosses plant property (i.e. public roads, rivers, and railroad tracks). The receptor grid should extend outward to a minimum of 1000 meters from the grid center and further if the source has maximum impacts occurring at or beyond 1000 meters.

BMM used a total of 302 receptors in a discrete Cartesian grid. The highest 1st high toluene concentration of 300.81 $\mu\text{g}/\text{m}^3$ occurs at the property boundary (see “Maximum Toluene Modeled Concentration Map with Contours” image).



Maximum Toluene Modeled Concentration Map with Contours

Meteorological Data Sets (for use in AERMOD): South Carolina has been divided into 12 areas such that the meteorological station/data assigned to each area is deemed by BAQ to be the most representative, in general, for AERMOD modeling purposes for that area and should be used as the default data for a given area. (Note: these area-station associations supersede those in Table 5.1 - page 36 - in "Air Quality Modeling Guidelines" of July 2001.

BMM is located in Spartanburg County. The modeling analysis was completed in AERMOD therefore the appropriate meteorological data set for Spartanburg County of GSP-GSO 2002-2006 with a station elevation of 972 feet used in the model.

Digital Terrain Data: National Elevation Dataset (NED) for use with AERMOD
DHEC requires the use of NED, [Digital Elevation Model (DEM) is not acceptable].

This NED data covering South Carolina was obtained from the United States Geological Survey (USGS). They are made available for use with regulatory AERMOD modeling analyses for sources located in South Carolina. The data is in county divisions at 1 arc-second (approximately 30-meter) horizontal resolution in GeoTIFF format. Please note that these data sources may occasionally be updated by USGS.

The BMM facility and the entire modeling domain is located within the borders of Spartanburg County, SC. The sources, buildings and receptors were extracted using AERMAP using the Spartanburg County NED file.

Background Data: The data collected through monitoring is used by the U.S Environmental Protection Agency, The South Carolina Department of Health and Environmental Control (SC DHEC), and the general public. The background data (used only in Standard No. 2 modeling) should be chosen based on the most representative available data. Include a justification for the data that was used in the modeling analysis. BMM does not emit any criteria pollutants above exemption levels; therefore, background data does not need to be considered or included in this air dispersion modeling analysis.

Input/Output Data: All data used in the modeling analyses should be included in the application. This information can be submitted as a hard copy or electronic form for SCREEN3 and in electronic form for AERMOD. AERMOD files need to include the BPIP Prime input file as well as the data files for the pollutants being modeled. BMM submitted AERMOD modeling files for the Standard 8 toxic pollutant toluene.

Files included as required to be submitted electronically:

- Emission Point Information: Form D-2573
- The BPIP file and the AERMOD input and output files
- Modeling Results and Comparison with Standards: A De Minimis analysis for Standard 8 toxic pollutants is included. A tabulation of modeling results is included.
- Aerial View of Facility
- Maximum Toluene Modeled Concentration Map with Contours

Section 5.0 - MSDS

MATERIAL SAFETY DATA SHEET

K119-SW
24 00

DATE OF PREPARATION
Oct 29, 2014

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

K119-SW

PRODUCT NAME

R7K119 Lacquer Thinner

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
<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
25	64742-89-8	Lt. Aliphatic Hydrocarbon Solvent		
			ACGIH TLV 300 PPM	12 mm
			OSHA PEL 300 PPM	
33	108-88-3	Toluene		
			ACGIH TLV 20 PPM	22 mm
			OSHA PEL 100 ppm (Skin)	
			OSHA PEL 150 ppm (Skin) STEL	
0.9	100-41-4	Ethylbenzene		
			ACGIH TLV 20 PPM	7.1 mm
			OSHA PEL 100 PPM	
			OSHA PEL 125 PPM STEL	
5	1330-20-7	Xylene		
			ACGIH TLV 100 PPM	5.9 mm
			ACGIH TLV 150 PPM STEL	
			OSHA PEL 100 PPM	
			OSHA PEL 150 PPM STEL	
4	67-56-1	Methanol		
			ACGIH TLV 200 ppm (Skin)	92 mm
			ACGIH TLV 250 ppm (Skin) STEL	
			OSHA PEL 200 ppm (Skin)	
			OSHA PEL 250 ppm (Skin) STEL	
10	67-63-0	2-Propanol		
			ACGIH TLV 200 PPM	33 mm
			ACGIH TLV 400 PPM STEL	
			OSHA PEL 400 PPM	
21	67-64-1	Acetone		
			ACGIH TLV 500 PPM	180 mm
			ACGIH TLV 750 PPM STEL	
			OSHA PEL 1000 PPM	
1	112-07-2	2-Butoxyethyl Acetate		
			ACGIH TLV Not Available	1 mm
			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.

HMIS Codes

Health	3*
Flammability	3
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 hematopoietic (blood-forming) 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 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

0.5

UEL

36.5

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

PRODUCT WEIGHT	6.70 lb/gal	803 g/l
SPECIFIC GRAVITY	0.81	
BOILING POINT	132 - 384 °F	55 - 195 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	100%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
	6.73 lb/gal	806 g/l
	5.30 lb/gal	635 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

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.

TOXICOLOGY DATA

CAS No.	Ingredient Name			
64742-89-8	Lt. Aliphatic Hydrocarbon Solvent	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
108-88-3	Toluene	LC50 RAT	4HR	4000 ppm
		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
67-56-1	Methanol	LC50 RAT	4HR	64000 ppm
		LD50 RAT		5630 mg/kg
67-63-0	2-Propanol	LC50 RAT	4HR	Not Available
		LD50 RAT		5045 mg/kg
67-64-1	Acetone	LC50 RAT	4HR	Not Available
		LD50 RAT		5800 mg/kg
112-07-2	2-Butoxyethyl Acetate	LC50 RAT	4HR	Not Available
		LD50 RAT		2400 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)

5 Liters (1.3 Gallons) and Less may be Classed as LTD. QTY. (PAINT OR RELATED).

Larger Containers are Regulated as:

UN1263, PAINT RELATED MATERIAL, 3, PG II, (ERG#128)

DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities

Acetone 5000 lb RQ

Toluene 1000 lb RQ

Xylenes (isomers and mixture) 100 lb RQ

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

UN1263, PAINT RELATED MATERIAL, 3, PG II, (ERG#128)

Canada (TDG)

UN1263, PAINT RELATED MATERIAL, CLASS 3, PG II, LIMITED QUANTITY, (ERG#128)

IMO

5 Liters (1.3 Gallons) and Less may be Shipped as Limited Quantity.

UN1263, PAINT RELATED MATERIAL, CLASS 3, PG II, (-17 C c.c.), EmS

F-E, S-E

IATA/ICAO

UN1263, PAINT RELATED MATERIAL, 3, PG II

SECTION 15 — REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
108-88-3	Toluene	33	
100-41-4	Ethylbenzene	0.8	
1330-20-7	Xylene	5	
67-56-1	Methanol	4	
	Glycol Ethers	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.

MATERIAL SAFETY DATA SHEET

L61XXB5989-2223
00 01

DATE OF PREPARATION
Feb 19, 2014

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

L61XXB5989-2223

PRODUCT NAME

OPEX* L61 Production Lacquer, PN 19 BLACK SPLATTER

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY

101 Prospect Avenue N.W.

Cleveland, OH 44115

Telephone Numbers and Websites

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
4	64742-89-8	Lt. Aliphatic Hydrocarbon Solvent		
		ACGIH TLV	100 PPM	53 mm
		OSHA PEL	100 PPM	
13	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	
0.3	100-41-4	Ethylbenzene		
		ACGIH TLV	20 PPM	7.1 mm
		OSHA PEL	100 PPM	
		OSHA PEL	125 PPM STEL	
2	1330-20-7	Xylene		
		ACGIH TLV	100 PPM	5.9 mm
		ACGIH TLV	150 PPM STEL	
		OSHA PEL	100 PPM	
		OSHA PEL	150 PPM STEL	
10	67-63-0	2-Propanol		
		ACGIH TLV	200 PPM	33 mm
		ACGIH TLV	400 PPM STEL	
		OSHA PEL	400 PPM	
6	78-83-1	2-Methyl-1-propanol		
		ACGIH TLV	50 PPM	8.7 mm
		OSHA PEL	50 PPM	
3	111-76-2	2-Butoxyethanol		
		ACGIH TLV	20 PPM	0.88 mm
		OSHA PEL	25 PPM	
4	67-64-1	Acetone		
		ACGIH TLV	500 PPM	180 mm
		ACGIH TLV	750 PPM STEL	
		OSHA PEL	1000 PPM	
7	78-93-3	Methyl Ethyl Ketone		
		ACGIH TLV	200 PPM	90.6 mm
		ACGIH TLV	300 PPM STEL	
		OSHA PEL	200 PPM	
		OSHA PEL	300 PPM STEL	
13	110-19-0	Isobutyl Acetate		
		ACGIH TLV	150 PPM	12.5 mm
		OSHA PEL	150 PPM	
2	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.

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 hematopoietic (blood-forming) 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.

HMIS Codes

Health	2*
Flammability	3
Reactivity	0

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**

27 °F TCC

LEL

0.9

UEL

12.8

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/m³ (total dust), 3 mg/m³ (respirable fraction), OSHA PEL 15 mg/m³ (total dust), 5 mg/m³ (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

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	7.30 lb/gal	875 g/l
SPECIFIC GRAVITY	0.88	
BOILING POINT	132 - 343 °F	55 - 172 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	83%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
	5.60 lb/gal	671 g/l
	5.36 lb/gal	643 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

HAZARDOUS POLYMERIZATION

Will not occur

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

Methyl Ethyl Ketone may increase the nervous system effects of other solvents.

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.

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			
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
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
67-63-0	2-Propanol	LC50 RAT	4HR	Not Available
		LD50 RAT		5045 mg/kg
78-83-1	2-Methyl-1-propanol	LC50 RAT	4HR	Not Available
		LD50 RAT		2460 mg/kg
111-76-2	2-Butoxyethanol	LC50 RAT	4HR	Not Available
		LD50 RAT		470 mg/kg
67-64-1	Acetone	LC50 RAT	4HR	Not Available
		LD50 RAT		5800 mg/kg
78-93-3	Methyl Ethyl Ketone	LC50 RAT	4HR	Not Available
		LD50 RAT		2740 mg/kg
110-19-0	Isobutyl Acetate	LC50 RAT	4HR	Not Available
		LD50 RAT		13400 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.

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. OR ORM-D

Larger Containers are Regulated as:

UN1263, PAINT, 3, PG II, (ERG#128)

DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities

Toluene 1000 lb RQ

Xylenes (isomers and mixture) 100 lb RQ

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

UN1263, PAINT, 3, PG II, (ERG#128)

Canada (TDG)

UN1263, PAINT, CLASS 3, PG II, LIMITED QUANTITY, (ERG#128)

IMO

5 Liters (1.3 Gallons) and Less may be Shipped as Limited Quantity.
 UN1263, PAINT, CLASS 3, PG II, (-3 C c.c.), EmS F-E, S-E

IATA/ICAO

UN1263, PAINT, 3, PG II

SECTION 15 — REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
108-88-3	Toluene	14	
100-41-4	Ethylbenzene	0.3	
1330-20-7	Xylene	2	
	Glycol Ethers	3	

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.

MATERIAL SAFETY DATA SHEET

M60B8
29 00

DATE OF PREPARATION
May 20, 2014

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

M60B8

PRODUCT NAME

OPEX® M60 Black Lacquer, Semi-Gloss Black

MANUFACTURER'S NAME

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

Telephone Numbers and Websites

Product Information	www.oem.sherwin-williams.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
16	64742-89-8	Lt. Aliphatic Hydrocarbon Solvent		
		ACGIH TLV	100 PPM	53 mm
		OSHA PEL	100 PPM	
10	108-88-3	Toluene		
		ACGIH TLV	20 PPM	22 mm
		OSHA PEL	100 ppm (Skin)	
		OSHA PEL	150 ppm (Skin) STEL	
0.2	100-41-4	Ethylbenzene		
		ACGIH TLV	20 PPM	7.1 mm
		OSHA PEL	100 PPM	
		OSHA PEL	125 PPM STEL	
9	67-63-0	2-Propanol		
		ACGIH TLV	200 PPM	33 mm
		ACGIH TLV	400 PPM STEL	
		OSHA PEL	400 PPM	
8	78-83-1	2-Methyl-1-propanol		
		ACGIH TLV	50 PPM	8.7 mm
		OSHA PEL	50 PPM	
3	111-76-2	2-Butoxyethanol		
		ACGIH TLV	20 PPM	0.88 mm
		OSHA PEL	25 PPM	
8	78-93-3	Methyl Ethyl Ketone		
		ACGIH TLV	200 PPM	90.6 mm
		ACGIH TLV	300 PPM STEL	
		OSHA PEL	200 PPM	
		OSHA PEL	300 PPM STEL	
16	110-19-0	Isobutyl Acetate		
		ACGIH TLV	150 PPM	12.5 mm
		OSHA PEL	150 PPM	
2	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	3
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 hematopoietic (blood-forming) 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 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

21 °F PMCC

LEL

1.0

UEL

12.7

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/m³ (total dust), 3 mg/m³ (respirable fraction), OSHA PEL 15 mg/m³ (total dust), 5 mg/m³ (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

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	7.47 lb/gal	894 g/l
SPECIFIC GRAVITY	0.90	
BOILING POINT	174 - 343 °F	78 - 172 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	79%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
	5.39 lb/gal	646 g/l
	5.39 lb/gal	646 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

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Methyl Ethyl Ketone may increase the nervous system effects of other solvents.

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.

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			
64742-89-8	Lt. Aliphatic Hydrocarbon Solvent	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
108-88-3	Toluene	LC50 RAT	4HR	4000 ppm
		LD50 RAT		5000 mg/kg
100-41-4	Ethylbenzene	LC50 RAT	4HR	Not Available
		LD50 RAT		3500 mg/kg
67-63-0	2-Propanol	LC50 RAT	4HR	Not Available
		LD50 RAT		5045 mg/kg
78-83-1	2-Methyl-1-propanol	LC50 RAT	4HR	Not Available
		LD50 RAT		2460 mg/kg
111-76-2	2-Butoxyethanol	LC50 RAT	4HR	Not Available
		LD50 RAT		470 mg/kg
78-93-3	Methyl Ethyl Ketone	LC50 RAT	4HR	Not Available
		LD50 RAT		2740 mg/kg
110-19-0	Isobutyl Acetate	LC50 RAT	4HR	Not Available
		LD50 RAT		13400 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.

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. OR ORM-D

Larger Containers are Regulated as:

UN1263, PAINT, 3, PG II, (ERG#128)

DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities

Toluene 1000 lb RQ

Xylenes (isomers and mixture) 100 lb RQ

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

UN1263, PAINT, 3, PG II, (ERG#128)

Canada (TDG)

UN1263, PAINT, CLASS 3, PG II, LIMITED QUANTITY, (ERG#128)

IMO

5 Liters (1.3 Gallons) and Less may be Shipped as Limited Quantity.

UN1263, PAINT, CLASS 3, PG II, (-6 C c.c.), EmS F-E, S-E

IATA/ICAO

UN1263, PAINT, 3, PG II

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

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
108-88-3	Toluene	10	
100-41-4	Ethylbenzene	0.1	
	Glycol Ethers	3	

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.