SHIELD
ENVIRONMENTAL ASSOCIATES, INC.

November 1, 2023

Mr. Zachary Bittner
Kentucky Department for Environmental Protection
Kentucky Division for Air Quality
2nd Floor, 300 Sower Blvd
Frankfort, KY 40601

Subject: Renewal Application for Permit F-18-056 R1
Hyster-Yale Group, Inc.
Facility ID # 21-151-00035
Agency Interest No. 2837

Project No. 306-1250

Dear Mr. Bittner:

Hyster-Yale Group, Inc. (Hyster) in Berea, Madison County, Kentucky, is submitting a renewal application for Permit F-18-056 R1 in accordance with 401 KAR 52:030 Section 12. The renewal application incorporates several changes to facility operations, including updated equipment names, material usage for existing equipment, the addition of a new touch-up paint booth, and the removal of the Small Parts Line.

Hyster has renamed the Frame Powder Line to the A&N Paint System. This application updates the existing 4-stage pre-treatment part washer associated with the A&N Paint System to include phosphatizing agent usage. A new A&N touch-up paint booth will be installed, which will be similar to the existing 1-3 ton touch-up booth.

This application adjusts the clean-up solvent usage associated with the existing main line (EU01A, EU 01B, EU01C & EU 01D), touch-up (EU 07A, 07B, 08B & 11) and counterweight (EU 09A) booths to better reflect current operations. Lacquer thinner usage at each touch-up (EU 07A, 07B, 08B, 11 & 24) booths has been added to the source-wide PTE calculations (Appendix B). Last, Hyster-Yale has removed the Small Parts Line (EU 03) and the Small Part Wash Tanks (IA 1) from the facility.

Hyster-Yale has provided relevant DEP7007 forms (Appendix A) and a permit markup (Appendix C) that reflect the above changes. Hyster-Yale is requesting to remain a Conditional Major Source and will continue to adhere to the current VOC, Particulate Matter, Individual

Lexington

948 Floyd Drive
Lexington, KY 40505
Telephone 859.294.5155
Fax 859.294.5255
www.shieldenv.com

Louisville, KY

KY EXCEL
KENTUCKY EXCELLENCE IN ENVIRONMENTAL LEADERSHIP

HAPs, and Combined HAPs limits stipulated in the current permit (F-18-056 R1). Should there be any questions or if additional information is necessary, please do not hesitate to contact Nicole Galavotti at (859) 294-5155. Thank you.

Sincerely,

SHIELD ENVIRONMENTAL ASSOCIATES, INC.

Nicole Galavotti, P.E.
Principal, Sr. Environmental Engineer
Email: nicole_galavotti@shieldmw.com

Daniel Porter, Ph.D. P.E.
Environmental Engineer
Email: daniel_porter@shieldmw.com

cc: Leslie Riddell – Hyster-Yale Group, Inc.

Attachments
Appendix A – DEP7007 Forms
Appendix B – Potential to Emit Calculations
Appendix C – Permit Markup
Appendix D – EDS

Appendix A

DEP7007 Forms

Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601

(502) 564-3999

DEP7007AI

Administrative Information

_✓__ Section AI.1: Source Information

_✓__ Section AI.2: Applicant Information

_✓__ Section AI.3: Owner Information

_✓__ Section AI.4: Type of Application

_✓__ Section AI.5: Other Required Information

_✓__ Section AI.6: Signature Block

_✓___ Section AI.7: Notes, Comments, and Explanations

Additional Documentation

_✓__ Additional Documentation attached

Source Name: **Hyster-Yale Group, Inc.**

KY EIS (AFS) #: **21-151-00035**

Permit #: **F-18-056 R1**

Agency Interest (AI) ID: **2837**

Date: **11/1/2023**

Section AI.1: Source Information

Physical Location Address:	**Street:**	2200 Menelaus Road				
	City:	Berea	**County:**	Madison	**Zip Code:**	40403
Mailing Address:	**Street or P.O. Box:**	Same as above				
	City:		**State:**		**Zip Code:**	

Standard Coordinates for Source Physical Location

Longitude: -84.3022 (decimal degrees) **Latitude:** 37.6008 (decimal degrees)

Primary (NAICS) Category: Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing

Primary NAICS #: 333924

Classification (SIC) Category: Industrial Truck & Tractors **Primary SIC #:** 3537

Briefly discuss the type of business conducted at this site: A fork truck manufacturing facility.

Description of Area Surrounding Source: ☐ Rural Area ☐ Industrial Park ☐ Residential Area ☐ Urban Area ☑ Industrial Area ☐ Commercial Area

Is any part of the source located on federal land? ☐ Yes ☑ No

Number of Employees: 851

Approximate distance to nearest residence or commercial property: *500 feet*

Property Area: 57 acres

Is this source portable? ☐ Yes ☐ No

What other environmental permits or registrations does this source currently hold or need to obtain in Kentucky?

NPDES/KPDES:	☑ Currently Hold	☐ Need	☐ N/A	General KPDES Permit # KYR003466
Solid Waste:	☐ Currently Hold	☐ Need	☑ N/A	
RCRA:	☑ Currently Hold	☐ Need	☐ N/A	EPA ID # KYD-068-331-735 (LQG of Hazardous Waste)
UST:	☐ Currently Hold	☐ Need	☑ N/A	

Type of Regulated Waste Activity: ☐ Mixed Waste Generator ☑ Generator ☐ Recycler ☐ Other: _____ ☐ U.S. Importer of Hazardous Waste ☐ Transporter ☐ Treatment/Storage/Disposal Facility ☐ N/A

Section AI.2: Applicant Information

Applicant Name: Hyster-Yale Group, Inc.

Title: (if individual)

Mailing Address:
Street or P.O. Box: 2200 Menelaus Road
City: Berea **State:** KY **Zip Code:** 40403

Email: (if individual)

Phone: (859) 986-5787

Technical Contact

Name: Timothy White

Title: Senior Director, Manufacturing

Mailing Address:
Street or P.O. Box: 2200 Menelaus Road
City: Berea **State:** KY **Zip Code:** 40403

Email: timothy.white2@hyster-yale.com

Phone: (859) 986-5165

Air Permit Contact for Source

Name: Nicole Galavotti, P.E.

Title: Principal/Sr. Environmental Engineer

Mailing Address:
Street or P.O. Box: 948 Floyd Drive
City: Lexington **State:** Kentucky **Zip Code:** 40505

Email: nicole_galavotti@shieldmw.com

Phone: 859-294-5155

Section AI.3: Owner Information

☐ **Owner same as applicant**

Name: Hyster-Yale Materials Handling, Inc.

Title:

Mailing Address:

Street or P.O. Box: 5875 Landerbrook Dr., Suite 300

City: Cleveland **State:** Ohio **Zip Code:** 44124

Email:

Phone: (404) 449-9600

List names of owners and officers of the company who have an interest in the company of 5% or more.

Name	Position

Section AI.4: Type of Application

Current Status: ☐ Title V ☑ Conditional Major ☐ State-Origin ☐ General Permit ☐ Registration ☐ None

Requested Action: *(check all that apply)*

☐ Name Change	☐ Initial Registration	☐ Significant Revision	☐ Administrative Permit Amendment
☑ Renewal Permit	☐ Revised Registration	☑ Minor Revision	☐ Initial Source-wide Operating Permit
☐ 502(b)(10)Change	☐ Extension Request	☐ Addition of New Facility	☐ Portable Plant Relocation Notice
☐ Revision	☐ Off Permit Change	☐ Landfill Alternate Compliance Submittal	☐ Modification of Existing Facilities
☐ Ownership Change	☐ Closure		

Requested Status: ☐ Title V ☑ Conditional Major ☐ State-Origin ☐ PSD ☐ NSR ☐ Other: _____

Is the source requesting a limitation of potential emissions? ☑ Yes ☐ No

Pollutant:	Requested Limit:	Pollutant:	Requested Limit:
☑ Particulate Matter	90 tons	☑ Single HAP	9 tons
☑ Volatile Organic Compounds (VOC)	90 tons	☑ Combined HAPs	22.5 tons
☐ Carbon Monoxide		☐ Air Toxics (40 CFR 68, Subpart F)	
☐ Nitrogen Oxides		☐ Carbon Dioxide	
☐ Sulfur Dioxide		☐ Greenhouse Gases (GHG)	
☐ Lead		☑ Other	0.7 lbs/yr Cobalt 183 lbs/yr Naphthalene 2,500 lbs/yr Ethyl Benzene

For New Construction:

Proposed Start Date of Construction: *(MM/YYYY)* N/A

Proposed Operation Start-Up Date: *(MM/YYYY)* N/A

For Modifications:

Proposed Start Date of Modification: *(MM/YYYY)* 01/2024

Proposed Operation Start-Up Date: *(MM/YYYY)* 01/2024

Applicant is seeking coverage under a permit shield. ☐ **Yes** ☑ **No**

Identify any non-applicable requirements for which permit shield is sought on a separate attachment to the application.

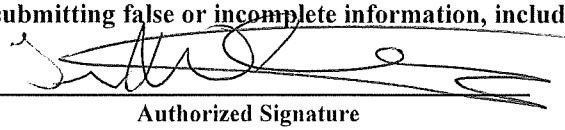
Section AI.5 Other Required Information

Indicate the documents attached as part of this application:

- ☐ DEP7007A Indirect Heat Exchangers and Turbines
- ☐ DEP7007B Manufacturing or Processing Operations
- ☐ DEP7007C Incinerators and Waste Burners
- ☐ DEP7007F Episode Standby Plan
- ☐ DEP7007J Volatile Liquid Storage
- ☑ DEP7007K Surface Coating or Printing Operations
- ☐ DEP7007L Mineral Processes
- ☐ DEP7007M Metal Cleaning Degreasers
- ☑ DEP7007N Source Emissions Profile
- ☐ DEP7007P Perchloroethylene Dry Cleaning Systems
- ☐ DEP7007R Emission Offset Credit
- ☐ DEP7007S Service Stations
- ☐ DEP7007T Metal Plating and Surface Treatment Operations
- ☑ DEP7007V Applicable Requirements and Compliance Activities
- ☐ DEP7007Y Good Engineering Practice and Stack Height Determination
- ☐ DEP7007AA Compliance Schedule for Non-complying Emission Units
- ☐ DEP7007BB Certified Progress Report
- ☐ DEP7007CC Compliance Certification
- ☐ DEP7007DD Insignificant Activities
- ☐ DEP7007EE Internal Combustion Engines
- ☐ DEP7007FF Secondary Aluminum Processing
- ☑ DEP7007GG Control Equipment
- ☐ DEP7007HH Haul Roads
- ☐ Confidentiality Claim
- ☐ Ownership Change Form
- ☐ Secretary of State Certificate
- ☐ Flowcharts or diagrams depicting process
- ☐ Digital Line Graphs (DLG) files of buildings, roads, etc.
- ☐ Site Map
- ☐ Map or drawing depicting location of facility
- ☐ Safety Data Sheet (SDS)
- ☐ Emergency Response Plan
- ☑ Other: Permit Markup, Potential to Emit Calculations, EDS

Section AI.6: Signature Block

I, the undersigned, hereby certify under penalty of law, that I am a responsible official*, and that I have personally examined, and am familiar with, the information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the information is on knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false or incomplete information, including the possibility of fine or imprisonment.



Authorized Signature

11/1/2023

Date

Timothy White

Type or Printed Name of Signatory

Senior Director, Manufacturing

Title of Signatory

*Responsible official as defined by 401 KAR 52:001.

Section AI.7: Notes, Comments, and Explanations

The renewal application incorporates several changes to facility operations, including updated equipment names, material usage for existing equipment, the addition of a new touch-up paint booth, and the removal of the Small Parts Line.

DEP7007K

Surface Coating or Printing Operations

Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601

(502) 564-3999

_✓_ Section K.1: Process Information

_✓_ Section K.2: Coating Operations

_✓_ Section K.3: Other Operations

_✓_ Section K.4: Coatings/Printing Materials as Applied

_✓_ Section K.5: HAP-containing Coatings/Printing Materials

__ Section K.6: Notes, Comments, and Explanations

Additional Documentation

_✓__ Complete DEP7007AI, DEP7007N, DEP7007V, and DEP7007GG.

_✓__ Attach SDS or Technical Sheets for all Coating/Printing Materials

____ Attach a flow diagram

Source Name: **Hyster-Yale Group, Inc.**

KY EIS (AFS) #: **21- 151-00035**

Permit #: **F-18-056**

Agency Interest (AI) ID: **2837**

Date: **11/1/2023**

Section K.1: Process Information

Emission Unit #: EU 24

Emission Unit Name: A&N Paint System Touch Up Paint Booth

Coating/Printing Line Name: A&N Paint System Touch Up Paint Booth

Proposed/Actual Date of Construction: *(MM/YYYY)* 01/2024

List Applicable Regulations:
401 KAR 59:010
401 KAR 63:020

Describe Overall Process: Touch-up Paint Booth

Describe Coatings/Printing Materials: See Section K4 for coating

Identify the Material that is Coated/Printed: ☑ Metal ☐ Vinyl ☐ Plastics ☐ Wood ☐ Foil ☐ Paper ☐ Other Substrate

Provide detailed description of material coated/printed: Various Fork-Lift parts

Provide approximate dimensions and range of sizes of parts being coated or printed: The size of the parts that can be coated ranges from 3" to 153" in size.

Identify the Type of Operation: ☑ Continuous ☐ Batch ☐ Other:

Describe Surface Preparation/Pretreatment Steps: None

For Coating Operations: ☑ Spray ☐ Flow ☐ Dip tank ☐ Electrodeposition ☐ Brush ☐ Powder ☐ Roller Coat ☐ Other:

For Printing Operations: *(Select all that apply)* ☐ Web ☐ Rotogravure ☐ Heatset ☐ Lithographic ☐ Sheetfed ☐ Letterpress ☐ Non-heatset ☐ Flexographic ☐ Other:

Describe Final Product: Painted Fork-Lift Parts

Check the category that most closely describes this unit:

☐ Large Appliance Coating	☐ Auto or Light-Duty Truck Coating	☐ Metal Furniture Coating	☐ Metal Coil Coating
☐ Beverage Can Coating	☑ Miscellaneious Metal Parts Coating	☐ Magnet Wire Insulation Coating	☐ Flat Wood Panel Coating
☐ Fabric, Vinyl, or Paper Coating	☐ Boat Manufacturing/ Ship Repair	☐ Pressure Sensitive Tape and Label Coating	☐ Magnet Tape Coating
☐ Publication Rotogravure Printing	☐ Coating of Plastic Parts for Business Machines	☐ Flexible Vinyl and Urethane Coating and Printing	
☐ Graphic Arts using Rotogravure and Flexographic Printing			☐ Other: _____

Section K.2: Coating Operations

K.2A: For Spray Coating

Gun/Booth ID	Describe Function	Type	Mode	Maximum Design Application Rate *(gal/hr or lb/hr)*		Describe how maximum rate was determined
EU 24	Liquid Paint Booth	☐ Conventional Air Gun ☐ Airless ☐ HVLP ☑ Electrostatic ☐ LVLP ☐ Aerosol Spray Can ☐ Other	☐ Manual ☐ Automatic	5.7	lb/gal	☐ Testing ☑ Equipment Specification Sheet ☐ Estimation
		☐ Conventional Air Gun ☐ Airless ☐ HVLP ☐ Electrostatic ☐ LVLP ☐ Aerosol Spray Can ☐ Other	☐ Manual ☐ Automatic			☐ Testing ☐ Equipment Specification Sheet ☐ Estimation
		☐ Conventional Air Gun ☐ Airless ☐ HVLP ☐ Electrostatic ☐ LVLP ☐ Aerosol Spray Can ☐ Other	☐ Manual ☐ Automatic			☐ Testing ☐ Equipment Specification Sheet ☐ Estimation

If spray guns are used simultaneously, describe:

K.2B: For Brush Coating

Describe Function:

Maximum Coating Application Rate: *(gal/hr)*

Section K.3: Other Operations

K.3A: For Finishing

Describe Finishing Processes: *Complete Form DEP7007B as applicable*	

K.3B: For Curing/Drying

Describe Curing/Drying Processes:	Description	Rated Capacity *(MMBtu/hr)*	Fuel	Control Device/Stack ID

K.3C: For Purge

Type: _____

Daily Usage: _____ gal/day

K.3D: For Clean-up

Type: ☑ Manual ☐ Automatic

Daily Usage: 4 gallons

Operating Hours: 20 hrs/day

K.3E: For Other Equipment

Describe Processes:	

Section K.4: Coatings/Printing Materials As Applied

Include SDS or Technical Sheets for all coating/printing materials used.

Trade Name of Material	Description *(Identify as coating, ink, fountain solution, blanket wash, cleaning solvent, thinning solvent, auto wash, manual wash, etc.)*	Emission Unit/Coating ID where material is used	SCC Code	SCC Code Units	Density *(lb/gal)*	Solid Content *(lb/gal)*	VOC Content *(lb/gal)*	Emission Factor for PM* *(lb/SCC)*	Transfer Efficiency *(%)*	Emission Factor for VOC *(lb/SCC)*	Capture Efficiency *(%)*	Control Device/ Stack ID
F63GL12 Polane SP Military Green	Coating	EU 24	40200110	Gallons	8.72	4.70	2.31	4.70	50	2.31	100	EP57
F63HL14 Polane SP Parchment	Coating	EU 24	40200110	Gallons	9.25	5.43	2.40	5.43	50	2.40	100	EP57
F63SPG24482-4311 Polane SP Sun Belt Rental Green	Coating	EU 24	40200110	Gallons	8.41	4.52	3.89	4.52	50	3.89	100	EP57
F63SPL30122-4311 Polane PPG Blue	Coating	EU 24	40200110	Gallons	8.35	4.53	3.81	4.53	50	3.81	100	EP57
F63SPR32349-4311 Polane Nacco Red	Coating	EU 24	40200110	Gallons	8.32	4.57	3.74	4.57	50	3.74	100	EP57
F63SPW30126-4311 Polane PPG White	Coating	EU 24	40200110	Gallons	10.14	6.46	3.67	6.46	50	3.67	100	EP57
F63SPR36695-4311 Polane SP New ABC Red	Coating	EU 24	40200110	Gallons	8.43	4.57	3.86	4.57	50	3.86	100	EP57
F63SPG36286-4311 Polane SP SW 6921	Coating	EU 24	40200110	Gallons	8.78	5.38	3.39	5.38	50	3.39	100	EP57
F63LGH36949-4311 Poalne Desert Tan Flat	Coating	EU 24	40200110	Gallons	11.28	7.97	3.03	7.97	50	3.03	100	EP57
F63SPR37296-4311 Polane SP, ABC RED	Coating	EU 24	40200110	Gallons	8.31	4.56	3.74	4.56	50	3.74	100	EP57
F85BL1 Kem FD HS Black Touch Up	Coating	EU 24	40200110	Gallons	9.29	4.98	1.50	4.98	50	1.50	100	EP57

Trade Name of Material	Description *(Identify as coating, ink, fountain solution, blanket wash, cleaning solvent, thinning solvent, auto wash, manual wash, etc.)*	Emission Unit/Coating ID where material is used	SCC Code	SCC Code Units	Density *(lb/gal)*	Solid Content *(lb/gal)*	VOC Content *(lb/gal)*	Emission Factor for PM* *(lb/SCC)*	Transfer Efficiency *(%)*	Emission Factor for VOC *(lb/SCC)*	Capture Efficiency *(%)*	Control Device/ Stack ID
F75KXH17938-4373 Kem 400 Parchment	Coating	EU 24	40200110	Gallons	9.17	4.21	4.94	4.21	50	4.94	100	EP57
F85HXH23086-4311 Kem FD HS Rollable Parchment	Coating	EU 24	40200110	Gallons	9.51	5.99	3.35	5.99	50	3.35	100	EP57
F85HXY31814-4311 Kem FD Yellow	Coating	EU 24	40200110	Gallons	9.61	5.69	2.64	5.69	50	2.64	100	EP57
Methyl Amyl Ketone	Cleaning Solvent	EU 24	40200998	Gallons	6.84	0	6.84	0.00	N/A	6.84	0	N/A
Lacquier Thinner 255A66	Lacquier Thinner	EU 24	40200998	Gallons	6.67	0	4.95	0.00	N/A	4.95	0	N/A

**Emission factor for particulate matter (PM) should not include transfer efficiency.*

Section K.5: Hazardous Air Pollutant-containing Coatings/Printing Materials

List each individual hazardous air pollutant (HAP) contained in each material.

Trade Name of Material	HAP Name	HAP CAS #	Identify Solid (*S*) or Volatile (*V*)	HAP % by weight	HAP Emission Factor *(lb/SCC)*	Control Device/ Stack ID
F63GL12 Polane SP Military Green	N/A	N/A	N/A	N/A	N/A	EP57
F63HL14 Polane SP Parchment	N/A	N/A	N/A	N/A	N/A	EP57
F63SPG24482-4311 Polane SP Sun Belt Rental Green	Ethylbenzene	100-41-4	V	0.10%	0.0084	EP57
F63SPL30122-4311 Polane PPG Blue	Ethylbenzene	100-41-4	V	0.10%	0.0084	EP57
F63SPR32349-4311 Polane Nacco Red	Ethylbenzene	100-41-4	V	0.10%	0.0083	EP57
F63SPW30126-4311 Polane PPG White	Methyl Isobutyl Ketone	108-10-1	V	0.10%	0.0101	EP57
F63SPR36695-4311 Polane SP New ABC Red	Ethylbenzene	100-41-4	V	0.20%	0.0169	EP57
F63SPG36286-4311 Polane SP SW 6921	Ethylbenzene	100-41-4	V	0.20%	0.0176	EP57
F63LGH36949-4311 Poalne Desert Tan Flat	Ethylbenzene Cumene	100-41-4 98-82-8	V	0.2% 0.3%	0.0225 0.0338	EP57
F63SPR37296-4311 Polane SP, ABC RED	Ethylbenzene	100-41-4	V	0.20%	0.0166	EP57

Trade Name of Material	HAP Name	HAP CAS #	Identify Solid (*S*) or Volatile (*V*)	HAP % by weight	HAP Emission Factor *(lb/SCC)*	Control Device/ Stack ID
F85BL1 Kem FD HS Black Touch Up	Ethylbenzene Xylene	100-41-4 1330-20-7	V	0.7% 4%	0.065 0.372	EP57
F75KXH17938-4373 Kem 400 Parchment	Ethylbenzene Xylene	100-41-4 1330-20-7	V	6% 31%	0.550 2.843	EP57
F85HXH23086-4311 Kem FD HS Rollable Parchment	Ethylbenzene Xylene	100-41-4 1330-20-7	V	8% 1%	0.761 0.095	EP57
F85HXY31814-4311 Kem FD Yellow	Ethylbenzene Xylene	100-41-4 1330-20-7	V	6% 1%	0.577 0.096	EP57
Methyl Amyl Ketone	N/A	N/A	N/A	N/A	N/A	N/A
Lacquier Thinner 255A66	N/A	N/A	N/A	N/A	N/A	N/A

Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601
(502) 564-3999

DEP7007N

Source Emissions Profile

_✓_ Section N.1: Emission Summary
_✓___ Section N.2: Stack Information
___ Section N.3: Fugitive Information
___ Section N.4: Notes, Comments, and Explanations

Additional Documentation

_✓__ Complete DEP7007AI

Source Name: Hyster-Yale Group, Inc.
KY EIS (AFS) #: 21- 151-00035
Permit #: F-18-056 R1
Agency Interest (AI) ID: 2837
Date: 11/1/2023

N.1: Emission Summary

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)*	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
EU 01A	EP15 Main Line Paint Booth #1 Primer	1	Paint Gun	WW Venturi	EP15	EP15	7.13	PM/PM10**	2.74	EDS	100	90	19.54	1.95	85.57	8.56
								VOC	2.93				20.89	20.89	91.50	91.50
		2	Clean Up Solvent	N/A	N/A	N/A	0.20	VOC	6.84	SDS			1.37	1.37	5.99	5.99
EU 01B	EP16 Main Line Paint Booth #2 Primer	1	Paint Gun	WW Venturi	EP16	EP16	7.13	PM/PM10**	2.74	EDS	100	90	19.54	1.95	85.57	8.56
								VOC	2.93				20.89	20.89	91.50	91.50
		2	Clean Up Solvent	N/A	N/A	N/A	0.20	VOC	6.84	SDS			1.37	1.37	5.99	5.99
EU 01C	Main Line Paint Booth #3 Topcoat	1	Paint Gun 1	WW Venturi	EP13	EP13	7.13	PM/PM10**	1.88	EDS	100	90	13.40	1.34	58.71	5.87
								VOC	2.31				16.47	16.47	72.14	72.14
		2	Clean Up Solvent	N/A	N/A	N/A	0.20	VOC	6.84	SDS			1.37	1.37	5.99	5.99
		3	Paint Gun 2	WW Venturi	EP13	EP13	7.13	PM/PM10**	2.17	EDS	100	90	15.47	1.55	67.77	6.78
								VOC	2.4				17.11	17.11	74.95	74.95
EU 01D	Main Line Paint Booth #4 Topcoat	1	Paint Gun 1	WW Venturi	EP14	EP14	7.13	PM/PM10**	1.88	EDS	100	90	13.40	1.34	58.71	5.87
								VOC	2.31				16.47	16.47	72.14	72.14
		2	Clean Up Solvent	N/A	N/A	N/A	0.20	VOC	6.84	SDS			1.37	1.37	5.99	5.99
		3	Paint Gun 2	WW Venturi	EP14	EP14	7.13	PM/PM10**	2.17	EDS	100	90	15.47	1.55	67.77	6.78
								VOC	2.4				17.11	17.11	74.95	74.95
EU 07A	EP11 1-3 Ton Touch Up	1	Paint Gun 1	Filter	EP11	EP11	5.7	VOC	4.94	EDS			28.16	28.16	123.33	123.33
								Xylene	2.84				16.19	16.19	70.90	70.90
								Ethylbenzene	0.55				3.14	3.14	13.73	13.73
								Total HAP	3.39				19.32	19.32	84.63	84.63
								PM/PM10**	2.1		100	95	11.97	0.60	52.43	2.62
		2	Clean Up Solvent	N/A	N/A	N/A	0.20	VOC	6.84	SDS			1.37	1.37	5.99	5.99
		3	Paint Gun 2	Filter	EP11	EP11	5.7	VOC	3.86	EDS			22.00	22.00	96.37	96.37
								Ethylbenzene	0.017				0.10	0.10	0.42	0.42
								Total HAP	0.017				0.10	0.10	0.42	0.42
								PM/PM10**	2.28		100	95	13.02	0.65	57.04	2.85
		4	Lacquer Thinner	N/A	N/A	N/A	0.20	VOC	4.95	SDS			0.99	0.99	4.33	4.33
								Toluene	1.35				0.27	0.27	1.18	1.18

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity *(SCC Units/hour)*	Pollutant	Uncontrolled Emission Factor *(lb/SCC Units)**	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency *(%)*	Control Efficiency *(%)*	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential *(lb/hr)*	Controlled Potential *(lb/hr)*	Uncontrolled Potential *(tons/yr)*	Controlled Potential *(tons/yr)*
EU 07B	EP37 4-5 Ton Touch Up	1	Paint Gun 1	Filter	EP37	EP37	5.7	VOC	4.94	EDS			28.16	28.16	123.33	123.33
								Xylene	2.84				16.19	16.19	70.90	70.90
								Ethylbenzene	0.55				3.14	3.14	13.73	13.73
								Total HAP	3.39				19.32	19.32	84.63	84.63
								PM/PM10**	2.1		100	95	11.97	0.60	52.43	2.62
		2	Clean Up Solvent	N/A	N/A	N/A	0.20	VOC	6.84	SDS			1.37	1.37	5.99	5.99
		3	Paint Gun 2	Filter	EP37	EP37	5.7	VOC	3.86	EDS			22.00	22.00	96.37	96.37
								Ethylbenzene	0.017				0.10	0.10	0.42	0.42
								Total HAP	0.017				0.10	0.10	0.42	0.42
								PM/PM10**	2.28		100	95	13.02	0.65	57.04	2.85
		4	Lacquer Thinner	N/A	N/A	N/A	0.20	VOC	4.95	SDS			0.99	0.99	4.33	4.33
								Toluene	1.35				0.27	0.27	1.18	1.18
EU 08B	EP12 Specialty Touch Up Paint Booth	1	Paint Gun 1	Filter	EP12	EP12	5.7	VOC	4.94	EDS			28.16	28.16	123.33	123.33
								Xylene	2.84				16.19	16.19	70.90	70.90
								Ethylbenzene	0.55				3.14	3.14	13.73	13.73
								Total HAP	3.39				19.32	19.32	84.63	84.63
								PM/PM10**	2.1		100	95	11.97	0.60	52.43	2.62
		2	Clean Up Solvent	N/A	N/A	N/A	0.20	VOC	6.84	SDS			1.37	1.37	5.99	5.99
		3	Paint Gun 2	Filter	EP12	EP12	5.7	VOC	3.86	EDS			22.00	22.00	96.37	96.37
								Ethylbenzene	0.017				0.10	0.10	0.42	0.42
								Total HAP	0.017				0.10	0.10	0.42	0.42
								PM/PM10**	2.28		100	95	13.02	0.65	57.04	2.85
		4	Lacquer Thinner	N/A	N/A	N/A	0.20	VOC	4.95	SDS			0.99	0.99	4.33	4.33
								Toluene	1.35				0.27	0.27	1.18	1.18
EU 11	EP29 6-9 Touch Up Paint Booth	1	Paint Gun	Filter	EP29	EP29	5.7	VOC	4.94	EDS			28.16	28.16	123.33	123.33
								Xylene	2.84				16.19	16.19	70.90	70.90
								Ethylbenzene	0.55				3.14	3.14	13.73	13.73
								Total HAP	3.39				19.32	19.32	84.63	84.63
								PM/PM10**	2.1		100	95	11.97	0.60	52.43	2.62
		2	Clean Up Solvent	N/A	N/A	N/A	0.20	VOC	6.84	SDS			1.37	1.37	5.99	5.99
		3	Lacquer Thinner	N/A	N/A	N/A	0.20	VOC	4.95	SDS			0.99	0.99	4.33	4.33
								Toluene	1.35				0.27	0.27	1.18	1.18
EU 09A	EP01 Counterweight Paint Booth	1	Paint Gun 1	Filter	EP01	EP01	5.7	VOC	3.81	EDS			21.72	21.72	95.12	95.12
								Ethylbenzene	0.008				0.05	0.05	0.20	0.20
								Total HAP	0.008				0.05	0.05	0.20	0.20
								PM/PM10**	2.27		100	95	12.94	0.65	56.67	2.83
		2	Paint Gun 2	Filter	EP01	EP01	5.7	VOC	2.3	EDS			13.11	13.11	57.42	57.42
								PM/PM10**	2.24		100	95	12.77	0.64	55.92	2.80
		3	Clean Up Solvent	N/A	N/A	N/A	0.20	VOC	6.84	SDS			1.37	1.37	5.99	5.99
		4	Paint Gun 3	Filter	EP01	EP01	5.7	VOC	2.31	EDS			13.17	13.17	57.67	57.67
								PM/PM10**	2.35		100	95	13.40	0.67	58.67	2.93

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity *(SCC Units/hour)*	Pollutant	Uncontrolled Emission Factor *(lb/SCC Units)**	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency *(%)*	Control Efficiency *(%)*	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential *(lb/hr)*	Controlled Potential *(lb/hr)*	Uncontrolled Potential *(tons/yr)*	Controlled Potential *(tons/yr)*
EU 24***	A&N Paint System Touch Up Paint Booth	1	Paint Gun 1	Filter	EP57	EP57	5.7	VOC	4.94	EDS			28.16	28.16	123.33	123.33
								Xylene	2.84				16.19	16.19	70.90	70.90
								Ethylbenzene	0.55				3.14	3.14	13.73	13.73
								Total HAP	3.39				19.32	19.32	84.63	84.63
								PM/PM10**	2.1		100	95	11.97	0.60	52.43	2.62
		2	Paint Gun 2	Filter	EP57	EP57	5.7	VOC	3.86	EDS			22.00	22.00	96.37	96.37
								Ethylbenzene	0.017				0.10	0.10	0.42	0.42
								Total HAP	0.017				0.10	0.10	0.42	0.42
								PM/PM10**	2.28		100	95	13.02	0.65	57.04	2.85
		3	Clean Up Solvent	N/A	N/A	N/A	0.20	VOC	6.84	SDS			1.37	1.37	5.99	5.99
		4	Lacquer Thinner	N/A	N/A	N/A	0.20	VOC	4.95	SDS			0.99	0.99	4.33	4.33
								Toluene	1.35				0.27	0.27	1.18	1.18
EU 05D	EP33 Mast Powder Coat System Pretreat Wash Burner	2	Phosphatizing Agent	N/A	N/A	1	0.48	VOC	0.02	SDS			0.01	0.01	0.04	0.04
EU 23B	EP49 - A&N Paint System Powder 4-Stage Pre-Treatment Part Washer	2	Phosphatizing Agent	N/A	N/A	1	0.48	VOC	0.02	SDS			0.01	0.01	0.04	0.04

*SCC Code = 40200110 (Units = Gallons of Coating), 40200998 (Units = Gallons of Solvent Used) or 39999995 (Units = Gallons of Phosphatizing Agent Used)

** Includes Transfer Efficiency

*** Stack information only included for EU 24 (EP57)

Section N.2: Stack Information

UTM Zone:

Stack ID	Identify all Emission Units (with Process ID) and Control Devices that Feed to Stack	Stack Physical Data			Stack UTM Coordinates		Stack Gas Stream Data		
		Equivalent Diameter *(ft)*	Height *(ft)*	Base Elevation *(ft)*	Northing *(m)*	Easting *(m)*	Flowrate *(acfm)*	Temperature *(°F)*	Exit Velocity *(ft/sec)*
EP57	EU 24	3.5	37.13	998			12000	70	20.79

Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601

(502) 564-3999

DEP7007GG

Control Equipment

Additional Documentation

_✓__ Complete Sections GG.1 through GG.12, as applicable

___ Attach manufacturer's specifications for each control device

_✓__ Complete DEP7007AI

Source Name: Hyster-Yale Group, Inc.

KY EIS (AFS) #: 21- 151-00035

Permit #: F-18-056

Agency Interest (AI) ID: 2837

Date: 11/1/2023

Section GG.1: General Information - Control Equipment

Control Device ID #	Control Device Name	Cost	Manufacturer	Model Name/ Serial #	Date Installed	Inlet Gas Stream Data For All Control Devices					Inlet Gas Stream Data For Condensers, Adsorbers, Afterburners, Incinerators, Oxidizers Only			Equipment Operational Data For All Control Devices		
						Temperature (°F)	Flowrate (scfm @ 68 °F)	Average Particle Diameter (μm)	Particle Density (lb/ft^3) or Specific Gravity	Gas Density (lb/ft^3)	Gas Moisture Content (%)	Gas Composition	Fan Type	Pressure Drop Range ($in. H_2O$)	Pollutants Collected/ Controlled	Pollutant Removal (%)
EP57	Paint Booth Filters		AJDralle	CPA CG100	01/2024	70	12,000	< 10 microns						0.45	PM/PM10	99.54

Section GG.6: Filter

Control Device ID #	Identify all Emission Units and Control Devices that Feed to Filter	Identify Type of Filter Unit: Baghouse, Cartridge Collector, or Other (specify)	Identify Type of Filtering Material: Fabric, Paper, Synthetic, or Other (specify)	Total Filter Area *(ft^2)*	Effective Air-to-Filter Ratio *($acfm/ft^2$)*	Continuous Monitoring Instrumentation (e.g. COMS, BLDS, none)	Additional Materials Introduced into the Control System (e.g. lime, carbon)		Identify Cleaning Method: Shaker, Pulse Air, Reverse Air, Pulse Jet, or Other (specify)	Identify Gas Cooling Method: Ductwork, Heat Exchanger, Bleed-in Air, Water Spray, or Other (specify)	For Ductwork:		For Bleed-in Air:	For Water Spray:
							Material	Injection Rate *(lb/hr)*			Length *(ft)*	Diameter *(ft)*	Flowrate *(scfm @ 68°F)*	Flowrate *(gal/min)*
EP57	EU 24 Paint Booth	Two-stage Filter	Synthetic	77.78	154				Replacement					

Division for Air Quality

300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007V
Applicable Requirements and Compliance Activities

_✓__ Section V.1: Emission and Operating Limitation(s)
_✓__ Section V.2: Monitoring Requirements
_✓__ Section V.3: Recordkeeping Requiremen
_✓__ Section V.4: Reporting Requirements
_✓__ Section V.5: Testing Requirements
___ Section V.6: Notes, Comments, and Explanations

Additional Documentation
_✓__ Complete DEP7007AI

Source Name: Hyster-Yale Group, Inc.
KY EIS (AFS) #: 21- 151-00035
Permit #: F-18-056
Agency Interest (AI) ID: 2837
Date: 11/1/2023

Section V.1: Emission and Operating Limitation(s)

Emission Unit #	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
EU 24	A&N Paint System Touch Up Booth	401 KAR 59:010 New process operation	PM	Emissions of PM of any affected facility up to a process rate of 1000 lbs/hr shall not exceed 2.34 lbs/hr			To determine lbs of PM emitted from the touch up paint booth operation: Average Particulate Emission Rate (lbs per hour) = paint usage (lbs per month) x emission factor (lbs per lbs of paint used) x (1- Control Efficiency) / hours of operation (hours per month).
				Opacity < 20%			Compliance with the opacity standard shall be determined by the permittee performing a qualitative visual observation of the opacity of emissions at each stack during daylight hours no less than weekly and maintaining a log of the observations. If visible emissions from the stacks are seen (not including condensed water in the plume), then an inspection of process/control equipment shall be initiated and corrective action taken. If visible emissions are present after the corrective action, the permittee may determine the opacity using Reference Method 9.

Emission Unit #	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
Source-Wide	All emission units including insignificant activities	401 KAR 52:030 Federally-enforceable permits for nonmajor sources	VOC		90 TPY		Monthly monitoring and recordkeeping to demonstrate compliance with this limitation shall be maintained
			PM/PM10		90 TPY		
			HAPs		22.5 TPY		
			Individual HAPs		9 TPY		
			Naphthalene		183 lbs/yr		
			Cobalt		0.7 lbs/yr		
			Ethyl Benzene		2,500 lbs/yr		

Section V.2: Monitoring Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Monitored	Description of Monitoring
Source-Wide	All emission units including insignificant activities	VOC	401 KAR 52:030 Federally-enforceable permits for nonmajor sources	Material usage	Monitor the monthly usage of each of coating that contain either PM, VOCs or HAPs. At the end of each month, monthly emissions and 12 month rolling totals for PM, VOCs or HAPs are calculated and recorded.
		PM/PM10			
		HAPs			
		Individual HAPs			
		Naphthalene			
		Cobalt			
		Ethyl Benzene			
EU 24	A&N Paint System Touch Up Booth	PM	401 KAR 59:010 New process operation	Material usage	Montior the monthly purchase and usage of coating usage.
				Opacity	Preform weekly visual obervations of the opacity of emissions at each stack during daylight hours no less than weekly and maintaining a log of the observations. If visible emissions from the stacks are seen (not including condensed water in the plume), then an inspection of process/control equipment shall be initiated and corrective action taken. If visible emissions are present after the corrective action, the permittee may determine the opacity using Reference Method 9.
				Pressure Drop	The permittee shall install, calibrate, maintain and operate according to manufacturer's specifications a monitoring device (differential pressure gauges or manometers) to determine the pressure drop across the dry filters once a day during the operation of the shot blaster. A permanent label displaying the operating range established for each collector shall be posted next to the selected instrument.

Section V.3: Recordkeeping Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Recorded	Description of Recordkeeping
Source-Wide	All emission units including insignificant activities	VOC	401 KAR 52:030 Federally-enforceable permits for nonmajor sources	Material usage	Keep calendar month records of the coating usage that contain either PM, VOC or HAPs.
		PM/PM10			
		HAPs			
		Individual HAPs			
		Naphthalene			
		Cobalt			
		Ethyl Benzene			
EU 24	A&N Paint System Touch Up Booth	PM	401 KAR 59:010 New process operation	Material usage	Keep monthly records of the coating usage.
				Opacity	Keep calendar week records of visual observations, inspections and opacity using method 9.
				Pressure Drop	The permittee shall maintain records of calibration of the monitoring device and a log of the pressure drop readings across the filters, including the date, and dates of filter replacements. For any booth that is not in operation on a given date, this fact should also be noted.

Section V.4: Reporting Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Reported	Description of Reporting
Source-Wide	All emission units including insignificant activities	VOC	401 KAR 52:030 Federally-enforceable permits for nonmajor sources	Material usage	Keep calendar month records of the coating usage that contain either PM, VOC or HAPs. At the end of each month, monthly emissions and 12 month rolling totals for PM, VOCs and HAPs are calculated and recorded. These records shall be reported for each semi-annual period.
		PM/PM10			
		HAPs			
		Individual HAPs			
		Naphthalene			
		Cobalt			
		Ethyl Benzene			
EU 24	A&N Paint System Touch Up Booth	PM	401 KAR 59:010 New process operation	Material usage	Keep calendar week records of the usage of blasting media. These records shall be reported for each semi-annual period.
				Opacity	Keep calendar week records of visual observations, inspections and opacity using method 9. These records shall be reported for each semi-annual period.

Section V.5: Testing Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Tested	Description of Testing
EU 24	A&N Paint System Touch Up Booth	PM/PM10 VOC HAPs Individual HAPs	401 KAR 59:005 Section 2(2) and KAR 50:045 Section 3	N/A	Testing shall be conducted at such times as may be required by the Cabinet in accordance with the Regulations 401 KAR 59:005 Section 2(2) and KAR 50:045 Section 3.

Appendix B

Potential to Emit Calculations

Table 1
Hyster-Yale Group, Inc. AI #2837
Berea, Kentucky
Yearly Emissions (Tons)

EU#	EP#	Process ID	Plant Area/ Process Description	N_2O	CO_2	CH_4	NOx	CO	SO_2	VOC	Xylene	Ethylbenzene	Benzene	Hexane (n)	Toluene	Manganese	Chromium	Nickel	HAP	PM/ PM10	Manganese*	Chromium*	Nickel*	HAP*	PM/ PM10*
02	25		Monorail Wheelabrator #1													0.12	0.02	0.02	0.17	9.44	0.01	0.00	0.00	0.01	0.41
~~03~~	~~07~~		~~Small Parts Powder Coat Pretreat Wash Burners~~																						
~~03~~	~~20~~		~~Small Parts Powder Coat Dry Off Oven~~																						
~~03~~	~~24~~		~~Small Parts Powder Coat Cure Oven~~																						
~~03~~	~~21~~		~~Small Parts Powder Coat System~~																						
~~03~~	~~22,23~~		~~Small Parts Flash Tunnels #1, #2~~																						
06	26		Swing Table Wheelabrator #2													0.02	0.00	0.00	0.03	1.86	0.00	0.00	0.00	0.00	0.08
10	46		Gasoline Tank & Dispenser							0.03	0.00	0.00	0.00	0.00	0.00				0.00					0.00	
11	29	1	6-9 ton Touch-Up Booth							123.33	70.97	13.74							84.71	52.54				84.71	2.63
11	29	2	6-9 ton Touch-Up Clean up Solvent							5.99															
11	29	3	6-9 ton Lacquer Thinner							4.33					1.18				1.18					1.18	
12	34		Pangborn PC4-16 Shot Blast													0.10	0.02	0.01	0.13	7.43	0.00	0.00	0.00	0.01	0.33
15	38		Gravimetric Lab							2.40															
16	39		Diesel Fire Pump at Lake	0.00	32.72	0.00	0.88	0.19	0.06	0.07										0.06					0.06
17	40		Diesel Fire Pump at Tank	0.00	52.81	0.00	1.42	0.31	0.09	0.12										0.10					0.10
18	41		Back Up Generator at Boiler Room	0.00	20.09	0.00	0.54	0.12	0.04	0.04										0.04					0.04
19	42		Nat. Gas Onan Generator at Maintenance Shop	0.00	1.64	0.00	0.03	0.05	0.00	0.00										0.00					0.00
20	43		Nat. Gas Generator at the Boiler Room	0.00	1.64	0.00	0.03	0.05	0.00	0.00										0.00					0.00
21	44		Nat. Gas Onan Generator for MIS (on roof)	0.00	3.58	0.00	0.07	0.11	0.00	0.00										0.00					0.00
01A	15	1	Main Line Paint Booth #1 Primer							91.50										85.67					8.57
01A	15	2	Main Line #1 Clean up Solvent							5.99															
01B	16	1	Main Line Paint Booth #2 Primer							91.50										85.67					8.57
01B	16	2	Main Line #2 Clean up Solvent							5.99															
01C	13	1	Main Line Paint Booth #3 Topcoat Applicator #1							72.14										58.71					5.87
01C	13	2	Main Line #3 Clean up Solvent							5.99															
01C	13	3	Main Line Paint Booth #3 Topcoat Applicator #2							74.95										67.83					6.78
01D	14	1	Main Line Paint Booth #4 Topcoat Applicator #1							72.14										58.71					5.87
01D	14	2	Main Line #4 Clean up Solvent							5.99															
01D	14	3	Main Line Paint Booth #4 Topcoat Applicator #2							74.95										67.83					6.78
01E	17		Main Line Cure Oven	0.05	2834.12	0.05	2.36	1.98	0.01	0.13										0.18					0.18
05A	30		Mast Powder Coat System																	173.81					0.02
05B	31		Mast Powder Coat Dry Off Oven	0.03	1648.94	0.03	1.37	1.15	0.01	0.08										0.10					0.10
05C	32		Mast Powder Coat Cure Oven	0.05	2473.41	0.05	2.06	1.73	0.01	0.11										0.16					0.16
05D	33	1	Mast Powder Coat System Pretreat Wash Burners	0.04	1932.35	0.04	1.61	1.35	0.01	0.09										0.12					0.12
05D	33	2	Mast Powder Wash Tanks Phosphatizing Agent							0.04															
07A	11	1	1-3 Ton Touch Up Booth Applicator #1							123.33	70.97	13.74							84.71	52.54				84.71	2.63
07A	11	2	1-3 Ton Touch Up Clean up Solvent							5.99															
07A	11	3	1-3 Ton Touch Up Booth Applicator #2							96.37		0.42							0.42	57.04				0.42	2.85
07A	12	4	1-3 Ton Touch Up Lacquer Thinner							4.33					1.18				1.18					1.18	
07B	37	1	4-5 Ton Touch Up Booth Applicator #1							123.33	70.97	13.74							84.71	52.54				84.71	2.63
07B	37	2	4-5 Ton Touch Up Clean up Solvent							5.99															
07B	37	3	4-5 Ton Touch Up Booth Applicator #2							96.37		0.42							0.42	57.04				0.42	2.85
07B	37	4	4-5 Ton Touch Up Lacquer Thinner							4.33					1.18				1.18					1.18	
08B	12	1	Specialty Touch Up Booth Applicator #1							123.33	70.97	13.74							84.71	52.54				84.71	2.63
08B	12	2	Specialty Touch Up Clean up Solvent							5.99															
08B	12	3	Specialty Touch Up Booth Applicator #2							96.37		0.42							0.42	57.04				0.42	2.85
08B	12	4	Specialty Touch Up Lacquer Thinner							4.33					1.18				1.18					1.18	
09A	01	1	Counterweight Paint Booth Applicator #1							95.12		0.21							0.21	56.60				0.21	0.28
09A	01	2	Counterweight Paint Booth Applicator #2							57.42										55.82					0.28
09A	01	3	Counterweight Clean up Solvent							5.99															
09A	01	4	Counterweight Paint Booth Applicator #3							57.67										58.67					0.29
09D	03		Counterweight Preheat and Cure Oven	0.05	2576.47	0.05	2.15	1.80	0.01	0.12										0.16					0.16
23A	48		A&N Paint System Powder Shot Blast Unit													0.04	0.01	0.01	0.06	3.15	0.00	0.00	0.00	0.00	0.03
23B	49	1	A&N Paint System Powder 4-Stage Pre Treatment Parts Washer (2.5 MMBtu/hr)	0.02	1288.24	0.02	1.07	0.90	0.01	0.06										0.08					0.08
23B	49	2	A&N Paint System Wash Tanks Phosphatizing Agent							0.04															
23C	50		A&N Paint System Powder Dry-Off Oven (2.24 MMBtu/hr)	0.02	1154.26	0.02	0.96	0.81	0.01	0.05										0.07					0.07
23D	51	1	A&N Paint System Powder Booth - Black Applicator #1																	2.52					2.52
23D	51	2	A&N Paint System Powder Booth - Black Applicator #2																	0.38					0.38
23E	52	1	A&N Paint System Powder Booth - Yellow Applicator #1																	2.52					2.52
23E	52	2	A&N Paint System Powder Booth - Yellow Applicator #2																	0.38					0.38
23F	53	1	A&N Paint System Powder Booth - Gold Applicator #1																	2.52					2.52
23F	53	2	A&N Paint System Powder Booth - Gold Applicator #2																	0.38					0.38
23G	54	1	A&N Paint System Powder Booth - Custom/Touch-Up Applicator #1																	347.62					0.38
23G	54	2	A&N Paint System Powder Booth - Custom/Touch-Up Applicator #2																	173.81					0.19
23H	54		A&N Paint System Powder Convection Cure Ovens 1 & 2 (4.3 MMBtu/hr each)	0.08	4431.53	0.08	3.69	3.10	0.02	0.20										0.28					0.28
24	57	1	A&N Paint System Touch Up Booth Applicator #1							123.33	70.97	13.74							84.71	52.54				84.71	2.63
24	57	2	A&N Paint System Touch Up Booth Applicator #2							96.37		0.42							0.42	57.04				0.42	2.85
24	57	3	A&N Paint System Clean up Solvent							5.99															
24	57	4	A&N Paint System Lacquer Thinner							4.33					1.18				1.18					1.18	
I	13		Burn Off Ovens (3.2 MMBtu/hr)	0.03	1648.94	0.03	1.37	1.15	0.01	0.08										0.10					0.10
I	3		3 Welders													0.16	0.00		0.16	1.82	0.16	0.00		0.16	1.82
I	Fug		Counterweight (CW) Hand Sanding																	0.10					0.00
Source-wide Emissions (Tons)				**0.37**	**20100.73**	**0.39**	**19.63**	**14.82**	**0.29**	**1774.78**	**354.85**	**70.57**	**0.00**	**0.00**	**5.91**	**0.44**	**0.06**	**0.04**	**431.88**	**1815.57**	**0.17**	**0.00**	**0.00**	**431.51**	**81.28**

I = Insignificant Activities
*** Controlled Emissions**

Table 2
Hyster-Yale Group, Inc. AI #2837
Berea, Kentucky
Hourly Emissions (lb/hr)

EU#	EP#	Process ID	Plant Area/ Process Description	N_2O	CO_2	CH_4	NOx	CO	SO_2	VOC	Xylene	Ethylbenzene	Benzene	Hexane (n)	Toluene	Manganese	Chromium	Nickel	HAP	PM/ PM10	Manganese*	Chromium*	Nickel*	HAP*	PM/ PM10*
02	25		Monorail Wheelabrator #1													0.03	0.01	0.00	0.04	2.16	0.00	0.00	0.00	0.00	0.09
~~03~~	~~07~~		~~Small Parts Powder Coat Pretreat Wash Burners~~																						
~~03~~	~~20~~		~~Small Parts Powder Coat Dry Off Oven~~																						
~~03~~	~~24~~		~~Small Parts Powder Coat Cure Oven~~																						
~~03~~	~~21~~		~~Small Parts Powder Coat System~~																						
~~03~~	~~22,23~~		~~Small Parts Flash Tunnels #1, #2~~																						
06	26		Swing Table Wheelabrator #2													0.01	0.00	0.00	0.01	0.42	0.00	0.00	0.00	0.00	0.02
10	46		Gasoline Tank & Dispenser							0.01	0.00	0.00	0.00	0.00	0.00				0.00					0.00	
11	29	1	6-9 ton Touch-Up Booth							28.16	16.20	3.14							19.34	12.00				19.34	0.60
11	29	2	6-9 ton Touch-Up Clean up Solvent							1.37															
11	29	3	6-9 ton Lacquer Thinner							0.99					0.27				0.27					0.27	
12	34		Pangborn PC4-16 Shot Blast													0.02	0.00	0.00	0.03	1.70	0.00	0.00	0.00	0.00	0.07
15	38		Gravimetric Lab							0.55															
16	39		Diesel Fire Pump at Lake	0.00	130.87	0.01	3.52	0.76	0.23	0.29										0.25					0.25
17	40		Diesel Fire Pump at Tank	0.00	211.23	0.01	5.68	1.22	0.37	0.46										0.40					0.40
18	41		Back Up Generator at Boiler Room	0.00	80.36	0.00	2.16	0.47	0.14	0.18										0.15					0.15
19	42		Nat. Gas Onan Generator at Maintenance Shop	0.00	6.55	0.00	0.12	0.20	0.00	0.00										0.00					0.00
20	43		Nat. Gas Generator at the Boiler Room	0.00	6.55	0.00	0.12	0.20	0.00	0.00										0.00					0.00
21	44		Nat. Gas Onan Generator for MIS (on roof)	0.00	14.33	0.00	0.27	0.44	0.00	0.00										0.00					0.00
01A	15	1	Main Line Paint Booth #1 Primer							20.89										19.56					1.96
01A	15	2	Main Line #1 Clean up Solvent							1.37															
01B	16	1	Main Line Paint Booth #2 Primer							20.89										19.56					1.96
01B	16	2	Main Line #2 Clean up Solvent							1.37															
01C	13	1	Main Line Paint Booth #3 Topcoat Applicator #1							16.47										13.40					1.34
01C	13	2	Main Line #3 Clean up Solvent							1.37															
01C	13	3	Main Line Paint Booth #3 Topcoat Applicator #2							17.11										15.49					1.55
01D	14	1	Main Line Paint Booth #4 Topcoat Applicator #1							16.47										13.40					1.34
01D	14	2	Main Line #4 Clean up Solvent							1.37															
01D	14	3	Main Line Paint Booth #4 Topcoat Applicator #2							17.11										15.49					1.55
01E	17		Main Line Cure Oven	0.01	647.06	0.01	0.54	0.45	0.00	0.03										0.04					0.04
05A	30		Mast Powder Coat System																	39.68					0.00
05B	31		Mast Powder Coat Dry Off Oven	0.01	376.47	0.01	0.31	0.26	0.00	0.02										0.02					0.02
05C	32		Mast Powder Coat Cure Oven	0.01	564.71	0.01	0.47	0.40	0.00	0.03										0.04					0.04
05D	33	1	Mast Powder Coat System Pretreat Wash Burners	0.01	441.18	0.01	0.37	0.31	0.00	0.02										0.03					0.03
05D	33	2	Mast Powder Wash Tanks Phosphatizing Agent							0.01															
07A	11	1	1-3 Ton Touch Up Booth Applicator #1							28.16	16.20	3.14							19.34	12.00				19.34	0.60
07A	11	2	1-3 Ton Touch Up Clean up Solvent							1.37															
07A	11	3	1-3 Ton Touch Up Booth Applicator #2							22.00		0.10							0.10	13.02				0.10	0.65
07A	12	4	1-3 Ton Touch Up Lacquer Thinner							0.99					0.27				0.27					0.27	
07B	37	1	4-5 Ton Touch Up Booth Applicator #1							28.16	16.20	3.14							19.34	12.00				19.34	0.60
07B	37	2	4-5 Ton Touch Up Clean up Solvent							1.37															
07B	37	3	4-5 Ton Touch Up Booth Applicator #2							22.00		0.10							0.10	13.02				0.10	0.65
07B	37	4	4-5 Ton Touch Up Lacquer Thinner							0.99					0.27				0.27					0.27	
08B	12	1	Specialty Touch Up Booth Applicator #1							28.16	16.20	3.14							19.34	12.00				19.34	0.60
08B	12	2	Specialty Touch Up Clean up Solvent							1.37															
08B	12	3	Specialty Touch Up Booth Applicator #2							22.00		0.10							0.10	13.02				0.10	0.65
08B	12	4	Specialty Touch Up Lacquer Thinner							0.99					0.27				0.27					0.27	
09A	01	1	Counterweight Paint Booth Applicator #1							21.72		0.05							0.05	12.92				0.05	0.06
09A	01	2	Counterweight Paint Booth Applicator #2							13.11										12.74					0.06
09A	01	3	Counterweight Clean up Solvent							1.37															
09A	01	4	Counterweight Paint Booth Applicator #3							13.17										13.40					0.07
09D	03		Counterweight Preheat and Cure Oven	0.01	588.24	0.01	0.49	0.41	0.00	0.03										0.04					0.04
23A	48		A&N Paint System Powder Shot Blast Unit													0.01	0.00	0.00	0.01	0.72	0.00	0.00	0.00	0.00	0.01
23B	49	1	A&N Paint System Powder 4-Stage Pre Treatment Parts Washer (2.5 MMBtu/hr)	0.01	294.12	0.01	0.25	0.21	0.00	0.01										0.02					0.02
23B	49	2	A&N Paint System Wash Tanks Phosphatizing Agent							0.01															
23C	50		A&N Paint System Powder Dry-Off Oven (2.24 MMBtu/hr)	0.00	263.53	0.01	0.22	0.18	0.00	0.01										0.02					0.02
23D	51	1	A&N Paint System Powder Booth - Black Applicator #1																	0.58					0.58
23D	51	2	A&N Paint System Powder Booth - Black Applicator #2																	0.09					0.09
23E	52	1	A&N Paint System Powder Booth - Yellow Applicator #1																	0.58					0.58
23E	52	2	A&N Paint System Powder Booth - Yellow Applicator #2																	0.09					0.09
23F	53	1	A&N Paint System Powder Booth - Gold Applicator #1																	0.58					0.58
23F	53	2	A&N Paint System Powder Booth - Gold Applicator #2																	0.09					0.09
23G	54	1	A&N Paint System Powder Booth - Custom/Touch-Up Applicator #1																	79.37					0.09
23G	54	2	A&N Paint System Powder Booth - Custom/Touch-Up Applicator #2																	39.68					0.04
23H	54		A&N Paint System Powder Convection Cure Ovens 1 & 2 (4.3 MMBtu/hr each)	0.02	1011.76	0.02	0.84	0.71	0.01	0.05										0.06					0.06
24	57	1	A&N Paint System Touch Up Booth Applicator #1							28.16	16.20	3.14							19.34	12.00				19.34	0.60
24	57	2	A&N Paint System Touch Up Booth Applicator #2							22.00		0.10							0.10	13.02				0.10	0.65
24	57	3	A&N Paint System Clean up Solvent							1.37															
24	57	4	A&N Paint System Lacquer Thinner							0.99					0.27				0.27					0.27	
I	13		Burn Off Ovens (3.2 MMBtu/hr)	0.01	376.47	0.01	0.31	0.26	0.00	0.02										0.02					0.02
I	3		3 Welders													0.04	0.00		0.04	0.41	0.04	0.00		0.04	0.41
I	Fug		Counterweight (CW) Hand Sanding																	0.02					0.00

I = Insignificant Activities
* Controlled Emissions

Table 3
Hyster-Yale Group, Inc. AI #2837
Berea, Kentucky
Emission Factors

EU#	EP#	Process ID	Plant Area/ Process Description	Emission Factor Units	Equipment Capacity	N_2O	CO_2	CH_4	NOx	CO	SO_2	VOC	Xylene	Ethylbenzene	Benzene	Hexane (n)	Toluene	Manganese	Chromium	Nickel	HAP	PM/ PM10	Control Equipment	Control Efficiency	Emission Factor Reference
02	25		Monorail Wheelabrator #1	lb/ton	0.27													0.10	0.02	0.02	0.140	8	Cartridge	95.62	BAAQMD Abrasive Blasting
~~03~~	~~07~~		~~Small Parts Powder Coat Pretreat Wash Burners~~																						
~~03~~	~~20~~		~~Small Parts Powder Coat Dry Off Oven~~																						
~~03~~	~~24~~		~~Small Parts Powder Coat Cure Oven~~																						
~~03~~	~~21~~		~~Small Parts Powder Coat System~~																						
~~03~~	~~22,23~~		~~Small Parts Flash Tunnels #1, #2~~																						
06	26		Swing Table Wheelabrator #2	lb/ton	0.053													0.10	0.02	0.02	0.140	8	Cartridge	95.62	BAAQMD Abrasive Blasting
10	46		Gasoline Tank & Dispenser	lb/gal	4.87							0.001	1.64E-05	4.45E-06	4.61E-05	4.68E-05	5.93E-05				0.00017				TANKS 4.0
11	29	1	6-9 ton Touch-Up Booth	lb/gal	5.70							4.94	2.843	0.550							3.393	2.10	2 Stage Filter	95.00	EDS/SDS
11	29	2	6-9 ton Touch-Up Clean up Solvent	lb/gal	0.20							6.84													SDS
11	29	3	6-9 ton Lacquer Thinner	lb/gal	0.20							4.95					1.35								SDS
12	34		Pangborn PC4-16 Shot Blast	lb/ton	0.21													0.10	0.02	0.02	0.140	8	Cartridge	95.62	BAAQMD Abrasive Blasting
15	38		Gravimetric Lab	lb/gal	0.08							6.58													SDS
16	39		Diesel Fire Pump at Lake	lb/1000 gallons	0.006	0.179	22960	0.9261	617.4	133	40.6	50.4										43.4			AP-42
17	40		Diesel Fire Pump at Tank	lb/1000 gallons	0.009	0.179	22960	0.9261	617.4	133	40.6	50.4										43.4			AP-42
18	41		Back Up Generator at Boiler Room	lb/1000 gallons	0.004	0.179	22960	0.9261	617.4	133	40.6	50.4										43.4			AP-42
19	42		Nat. Gas Onan Generator at Maintenance Shop	lb/MMScf	0.00005	2.2	120000	2.3	2270	3720	0.588	29.6										9.5			AP-42, 3.2-3 and MRR for GHGs
20	43		Nat. Gas Generator at the Boiler Room	lb/MMScf	0.00005	2.2	120000	2.3	2270	3720	0.588	29.6										9.5			AP-42, 3.2-3 and MRR for GHGs
21	44		Nat. Gas Onan Generator for MIS (on roof)	lb/MMScf	0.00012	2.2	120000	2.3	2270	3720	0.588	29.6										9.5			AP-42, 3.2-3 and MRR for GHGs
01A	15	1	Main Line Paint Booth #1 Primer	lb/gal	7.13							2.93										2.74	WW Venturi	90.00	EDS/SDS
01A	15	2	Main Line #1 Clean up Solvent	lb/gal	0.20							6.84													SDS
01B	16	1	Main Line Paint Booth #2 Primer	lb/gal	7.13							2.93										2.74	WW Venturi	90.00	EDS/SDS
01B	16	2	Main Line #2 Clean up Solvent	lb/gal	0.20							6.84													SDS
01C	13	1	Main Line Paint Booth #3 Topcoat Applicator #1	lb/gal	7.13							2.31										1.88	WW Venturi	90.00	EDS/SDS
01C	13	2	Main Line #3 Clean up Solvent	lb/gal	0.20							6.84													SDS
01C	13	3	Main Line Paint Booth #3 Topcoat Applicator #2	lb/gal	7.13							2.40										2.17	WW Venturi	90.00	EDS/SDS
01D	14	1	Main Line Paint Booth #4 Topcoat Applicator #1	lb/gal	7.13							2.31										1.88	WW Venturi	90.00	EDS/SDS
01D	14	2	Main Line #4 Clean up Solvent	lb/gal	0.20							6.84													SDS
01D	14	3	Main Line Paint Booth #4 Topcoat Applicator #2	lb/gal	7.13							2.40										2.17	WW Venturi	90.00	EDS/SDS
01E	17		Main Line Cure Oven	lb/10 MMSCF	0.0054	2.2	120000	2.3	100	84	0.6	5.5										7.6			AP-42, 1.4
05A	30		Mast Powder Coat System	lb/lb	396.83																	0.10	Filter	99.99	SDS
05B	31		Mast Powder Coat Dry Off Oven	lb/10 MMSCF	0.0031	2.2	120000	2.3	100	84	0.6	5.5										7.6			AP-42, 1.4
05C	32		Mast Powder Coat Cure Oven	lb/10 MMSCF	0.0047	2.2	120000	2.3	100	84	0.6	5.5										7.6			AP-42, 1.4
05D	33	1	Mast Powder Coat System Pretreat Wash Burners	lb/10 MMSCF	0.0037	2.2	120000	2.3	100	84	0.6	5.5										7.6			AP-42, 1.4
05D	33	2	Mast Powder Wash Tanks Phosphatizing Agent	lb/gal	0.48							0.020													SDS
07A	11	1	1-3 Ton Touch Up Booth Applicator #1	lb/gal	5.70							4.94	2.843	0.550							3.393	2.10	2 Stage Filter	95.00	EDS/SDS
07A	11	2	1-3 Ton Touch Up Clean up Solvent	lb/gal	0.20							6.84													SDS
07A	11	3	1-3 Ton Touch Up Booth Applicator #2	lb/gal	5.70							3.86		0.017							0.017	2.28	2 Stage Filter	95.00	EDS/SDS
07A	12	4	1-3 Ton Touch Up Lacquer Thinner	lb/gal	0.20							4.95					1.35								SDS
07B	37	1	4-5 Ton Touch Up Booth Applicator #1	lb/gal	5.70							4.94	2.843	0.550							3.393	2.10	2 Stage Filter	95.00	EDS/SDS
07B	37	2	4-5 Ton Touch Up Clean up Solvent	lb/gal	0.20							6.84													SDS
07B	37	3	4-5 Ton Touch Up Booth Applicator #2	lb/gal	5.70							3.86		0.017							0.017	2.28	2 Stage Filter	95.00	EDS/SDS
07B	37	4	4-5 Ton Touch Up Lacquer Thinner	lb/gal	0.20							4.95					1.35								SDS
08B	12	1	Specialty Touch Up Booth Applicator #1	lb/gal	5.70							4.94	2.843	0.550							3.393	2.10	2 Stage Filter	95.00	EDS/SDS
08B	12	2	Specialty Touch Up Clean up Solvent	lb/gal	0.20							6.84													SDS
08B	12	3	Specialty Touch Up Booth Applicator #2	lb/gal	5.70							3.86		0.017							0.017	2.28	2 Stage Filter	95.00	EDS/SDS
08B	12	4	Specialty Touch Up Lacquer Thinner	lb/gal	0.20							4.95					1.35								SDS
09A	01	1	Counterweight Paint Booth Applicator #1	lb/gal	5.70							3.81		0.008							0.008	2.27	3 Stage Filter	99.50	EDS/SDS
09A	01	2	Counterweight Paint Booth Applicator #2	lb/gal	5.70							2.30										2.24	3 Stage Filter	99.50	EDS/SDS
09A	01	3	Counterweight Clean up Solvent	lb/gal	0.20							6.84													SDS
09A	01	4	Counterweight Paint Booth Applicator #3	lb/gal	5.70							2.31										2.35	3 Stage Filter	99.50	EDS/SDS
09D	03		Counterweight Preheat and Cure Oven	lb/10 MMSCF	0.0049	2.2	120000	2.3	100	84	0.6	5.5										7.6			AP-42, 1.4
23A	48		A&N Paint System Powder Shot Blast Unit	lb/ton	0.09000													0.10	0.02	0.02	0.140	8	Cartridge	99.00	BAAQMD Abrasive Blasting
23B	49	1	A&N Paint System Powder 4-Stage Pre Treatment Parts Washer (2.5 MMBtu/hr)	lb/10 MMSCF	0.0025	2.2	120000	2.3	100	84	0.6	5.5										7.6			AP-42, 1.4
23B	49	2	A&N Paint System Wash Tanks Phosphatizing Agent	lb/gal	0.48							0.020													SDS
23C	50		A&N Paint System Powder Dry-Off Oven (2.24 MMBtu/hr)	lb/10 MMSCF	0.0022	2.2	120000	2.3	100	84	0.6	5.5										7.6			AP-42, 1.4
23D	51	1	A&N Paint System Powder Booth - Black Applicator #1	lb/lb	952.38																	0.55	Filter	99.89	SDS
23D	51	2	A&N Paint System Powder Booth - Black Applicator #2	lb/lb	317.46																	0.25	Filter	99.89	SDS
23E	52	1	A&N Paint System Powder Booth - Yellow Applicator #1	lb/lb	952.38																	0.55	Filter	99.89	SDS
23E	52	2	A&N Paint System Powder Booth - Yellow Applicator #2	lb/lb	317.46																	0.25	Filter	99.89	SDS
23F	53	1	A&N Paint System Powder Booth - Gold Applicator #1	lb/lb	952.38																	0.55	Filter	99.89	SDS
23F	53	2	A&N Paint System Powder Booth - Gold Applicator #2	lb/lb	317.46																	0.25	Filter	99.89	SDS
23G	54	1	A&N Paint System Powder Booth - Custom/Touch-Up Applicator #1	lb/lb	317.46																	0.25	Filter	99.89	SDS
23G	54	2	A&N Paint System Powder Booth - Custom/Touch-Up Applicator #2	lb/lb	158.73																	0.25	Filter	99.89	SDS
23H	54		A&N Paint System Powder Convection Cure Ovens 1 & 2 (4.3 MMBtu/hr each)	lb/10 MMSCF	0.0084	2.2	120000	2.3	100	84	0.6	5.5										7.6			AP-42, 1.4
24	57	1	A&N Paint System Touch Up Booth Applicator #1	lb/gal	5.70							4.94	2.843	0.550							3.393	2.10	2 Stage Filter	95.00	EDS/SDS
24	57	2	A&N Paint System Touch Up Booth Applicator #2	lb/gal	5.70							3.86		0.017							0.017	2.28	2 Stage Filter	95.00	EDS/SDS
24	57	3	A&N Paint System Clean up Solvent	lb/gal	0.20							6.84													SDS
24	57	4	A&N Paint System Lacquer Thinner	lb/gal	0.20							4.95					1.3485								SDS
I	13		Burn Off Ovens (3.2 MMBtu/hr)	lb/10 MMSCF	0.0031	2.2	120000	2.3	100	84	0.6	5.5										7.6			AP-42, 1.4
I	3		3 Welders	lb/1000 lbs	0.114													0.318	0.001			3.64			SDS
I	Fug		Counterweight (CW) Hand Sanding	lb/CW	7.90																	0.0028		99.70	Mass Balance

I = Insignificant Activities

Appendix C

Permit Markup

Commonwealth of Kentucky

Energy and Environment Cabinet
Department for Environmental Protection
Division for Air Quality
300 Sower Boulevard, 2nd Floor
Frankfort, Kentucky 40601
(502) 564-3999

AIR QUALITY PERMIT

Issued under 401 KAR 52:030

Permittee Name:	**Hyster-Yale Group, Inc.**
Mailing Address:	**2200 Menelaus Road, Berea, KY40403**
Source Name:	**Same as above**
Mailing Address:	
Source Location:	**2200 Menelaus Road**
Permit ID:	**F-18-056 R1**
Agency Interest #:	**2837**
Activity ID:	**APE20190003**
Review Type:	**Conditional Major, Operating**
Source ID:	**21-151-00035**
Regional Office:	**Frankfort Regional Office** **300 Sower Boulevard, 1st Floor** **Frankfort, KY 40601** **(502) 564-3358**
County:	**Madison**
Application Complete Date:	**December 12, 2018**
Issuance Date:	**May 5, 2019**
Revision Date:	**March 15, 2020**
Expiration Date:	**May 5, 2024**

Rick J. Shewekah

For Melissa Duff, Director
Division for Air Quality

TABLE OF CONTENTS

	Permit type	**Activity#**	**Complete Date**	**Issuance Date**	**Summary of Action**
F-18-056	**Renewal**	**APE20180002**	**12/12/18**	**5/5/2019**	**Renewal**
F-18-056 R1	**Revision**	**APE20190003**	**11/1/19**	**3/15/2020**	**Addition of a new powder coating line, EU 23 (EP 48 – EP 56).**

SECTION A – PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Energy and Environment Cabinet (Cabinet) hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes (KRS) Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:030, Federally-enforceable permits for non-major sources.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.

SECTION B – EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

EU01 Main Line Paint Booths

Emission Point	Description	Capacity	Construction	Control Device	Applicable Regulation
EP 15 & 16	Paint Booth #1 & #2 (Primer)	1 Applicator each 7.13 gal/hr.	1996	Water wash filtration (90%)	401 KAR 59:010
EP 13 & 14	Paint Booth #3 & #4 (Topcoat)	2 Applicators each booth 7.13 gal/hr.	1996	Water wash filtration (90%)	401 KAR 59:010
EP 17	Cure Oven	5.5 MMBtu/hr. Natural Gas	1996	None	None
EP 13, 14, 15 & 16	Clean-up Solvent	0.2 gal/hr each	N/A	None	None

APPLICABLE REGULATIONS:

401 KAR 59:010, *New process operations*

401 KAR 63:020, *Potentially hazardous matter or toxic substances*

1. **Operating Limitations:**

   The water wash filtration system shall be operated according to the manufacturer's specifications and recommendations at any time a given spray booth is in use.

2. **Emission Limitations:**

   a. The following emission limitations for particulate matter are pursuant to 401 KAR 59:010, Section 3 (2):

EMISSION UNIT	AFFECTED FACILITY	MAXIMUM CAPACITY (ton/hr.)	MAXIMUM ALLOWABLE EMISSION RATE (lb./hr.)
01	Spray Coating Operation	0.22	2.34

   Emission of particulate matter from a control device or stack of any affected facility up to a process rate of 1000 lbs./hr. shall not exceed **2.34** lbs./hr.

   Compliance Demonstration Method:

   The source is assumed to be in compliance when the water wash filters are properly operated and maintained. Refer to Subsection **4. Monitoring Requirements**.

   b. The opacity of visible emissions from each stack shall not equal or exceed 20 percent [401 KAR 59:010, Section 3 (1)].

   Compliance Demonstration Method:

   See **4. Monitoring Requirements** for opacity compliance demonstration.

   c. See Section D for the source-wide VOC, HAPs and PM emission limitations.

SECTION B – EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

2. Emission Limitations (Continued):

d. Based upon the emission rates of toxics and hazardous air pollutants determined by the Cabinet using information provided in the application and supplemental information submitted by the source, the Cabinet determines the affected facility to be in compliance with 401 KAR 63:020.

3. Testing Requirements:

Testing shall be conducted at such times as may be required by the Cabinet in accordance with 401 KAR 59:005, Section 2(2) and 50:045, Section 4.

4. Specific Monitoring Requirements:

a. Compliance with the opacity standard shall be determined by the permittee performing a qualitative visual observation of the opacity of emissions at each stack no less than weekly and maintaining a log of the observations. If visible emissions from the stacks are seen (not including condensed water in the plume), then an inspection of process/control equipment shall be initiated and corrective action taken. If visible emissions are present after the corrective action, the permittee may determine the opacity using Reference Method 9.

b. Water pressure to the water wash shall be monitored daily during operation.

c. The twelve-month rolling total VOC, HAPs and PM emissions shall be monitored monthly.

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain a log of the visual observations noting date, time, initials of observers, and records of corrective actions taken as a result of visible emissions from a stack and records of any Reference Method 9 readings performed.

b. The permittee shall maintain a log of the water pressure to the nozzle for the water wash filtration systems including the date. For any booth that is not in operation on a given date, this fact should also be noted.

c. Monthly records shall be kept of all materials used containing VOC, HAP and PM, including the product type, amount used and the weight percentages of VOC, PM and all individual HAPs.

d. At the end of each month, VOC, HAP and PM emissions shall be calculated per Section D of this permit, and every month, a new 12-month rolling total for VOC, HAP and PM emissions shall be calculated.

e. The permittee shall maintain monthly records of the volume of natural gas burned. The volume of natural gas in million cubic feet ($MMft^3$) shall be multiplied by the appropriate AP-42 emission factor to determine VOC and PM/PM_{10} emissions from natural gas combustion.

SECTION B – EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Recordkeeping Requirements (Continued):

Monthly VOC emission = Monthly usage of natural gas (million cubic feet) x 5.5 lb./million cubic feet

Monthly PM/PM_{10} emission = Monthly usage of natural gas (million cubic feet) x 7.6 lb./million cubic feet

6. Specific Reporting Requirements:

a. The permittee shall submit a copy of the control device inspection and repair log for those times when corrective actions are required due to an opacity exceedance and/or records of any Reference Method 9 opacity observations as noted in Section B (4) a. Copies of these records shall be submitted as a part of the semiannual reporting as required in Section F (5) & (6).

b. The permittee shall report the number of gallons of each coating applied, the amount of VOC's, HAP's and PM contained in the coatings, and the source wide monthly and twelve (12) month rolling total VOC, HAPs and PM emissions as part of the semiannual reporting as required in Section F (5) & (6).

7. Specific Control Equipment Operating Conditions:

Water supply to the water wash shall be free of pieces of paint sludge or other debris that may plug the piping or nozzle.

SECTION B – EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Point	Description	Capacity	Construction	Control Device	Applicable Regulation
EU 02 (EP 25)	Monorail Wheelabrator #1	539 lb./hr.	1979	Cartridge Filter (95.62%)	401 KAR 59:010
EU 06 (EP 26)	Swing Table Wheelabrator #2 96 inch Swing Table System	106 lb./hr.	1979	Cartridge Filter: (95.62%)	401 KAR 59:010

APPLICABLE REGULATIONS:

401 KAR 59:010, *New process operations*

1. **Operating Limitations:**

   ~~a. The usage of raw materials in the affected facility shall be limited so that the emissions limitations set forth in item 2, below, are not exceeded.~~

   b. Cartridge Filters shall be in place and operational at all times when Wheelabrator operations are taking place.

2. **Emission Limitations:**

   a. Particulate emissions shall not exceed 2.34 lbs./hr. for wheelabrators/shot blasting operations. [401 KAR 59:010, Section 3(2)]

   b. The opacity of visible emissions from each stack shall not exceed 20 percent for wheelabrators/shot blasting operations. [401 KAR 59:010, Section 3 (1)]

   Compliance Demonstration Method for PM/PM_{10} :

   To determine lbs. of PM/PM_{10} emitted from abrasive metal cleaning operations:
   For each abrasive metal cleaning operation:

   1) (tons/month of blasting shot) X (EF = 8 lb./ton shot) X (1-C.E.) = lbs./month PM/PM_{10} emitted.

   2) Total PM/PM_{10} emitted from abrasive metal cleaning operations = $\sum$ PM/PM_{10} from each abrasive metal cleaning operation.

   See **4. Monitoring Requirements** for opacity compliance demonstration.

   c. See Section D for the source-wide PM emission limitations.

3. **Testing Requirements:**

   Testing shall be conducted at such times as may be required by the Cabinet in accordance with 401 KAR 59:005, Section 2(2) and 50:045, Section 4.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Specific Monitoring Requirements:

a. Compliance with the opacity standard shall be determined by the permittee performing a qualitative visual observation of the opacity of emissions at each stack during daylight hours no less than weekly and maintaining a log of the observations. If visible emissions from the stacks are seen (not including condensed water in the plume), then an inspection of process/control equipment shall be initiated and corrective action taken. If visible emissions are present after the corrective action, the permittee may determine the opacity using Reference Method 9.

b. The permittee shall install, calibrate, maintain and operate according to manufacturer's specifications a monitoring device (differential pressure gauges or manometers) to determine the pressure drop across the filters once a day during the operation of the shot blaster. A permanent label displaying the operating range established for each collector shall be posted next to the selected instrument.

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain a log of the visual observations noting date, time and initials of observers, records of corrective actions taken as a result of visible emissions from a stack and records of any Reference Method 9 readings performed.

b. The permittee shall maintain records of calibration of the monitoring device and a log of the pressure drop readings across the filters, including the date, and dates of filter replacements. For any unit that is not in operation on a given date, this fact should also be noted.

c. The permittee shall keep filter specifications on site.

d. The permittee shall maintain monthly records of the purchase and usage of blasting media. PM/PM_{10} emissions shall be calculated and recorded on a *monthly* basis. These records shall be summarized in tons per month PM/PM_{10} emissions; subsequently, tons of PM/PM_{10} emissions per rolling 12-month period shall be recorded. In addition, these records shall demonstrate compliance with PM/PM_{10} emission limitations listed herein for the conditional major limitations. These records shall be maintained on site for a period of five years from the date the data was collected and shall be provided to the Division upon request.

6. Specific Reporting Requirements:

The permittee shall submit, within 30 days following the end of each calendar half, an emissions calculations worksheet, which utilizes emission factors from a technical reference approved by the Division. These worksheets shall be submitted in a printed or electronic form and shall serve as the method of determining compliance with 401 KAR 52:030 and 401 KAR 59:010.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EU03

Emission Point	Description	Capacity	Construction	Control Device	Applicable Regulation
EP 21	Small Parts Powder Coat System	1270 lbs/hr	2000	2-stage dry filter emitting back into the booth: 99.99%	401 KAR 59:010
EP 07	Small Parts Wash Tank Burners	5.0 MMBtu/hr. Natural Gas Fired	1996	None	401 KAR 59:015
EP 20	Small Parts Coat Dry Off Oven	3.5 MMBtu/hr Natural Gas Fired	1996	None	NA
EP 24	Small Parts Powder Coat Cure Oven	10 MMBtu/hr Natural Gas Fired	1996	None	NA

APPLICABLE REGULATIONS:

401 KAR 59:015, *New indirect heat exchangers*

401 KAR 59:010, *New process operations*

1. Operating Limitations:

401 KAR 59:010

a. The rate of materials used in affected facility shall not produce emissions which exceed the limitations as described in Section B(2) below.

401 KAR 59:015

b. Only natural gas shall be burned as fuel in EP 07.

2. Emission Limitations:

The affected facility operates and exhausts inside the building

a. Standard for Particulate Matter [401 KAR 59:010, Section 3(2)]:
Emissions of particulate matter from a control device or stack of any affected facility up to a process rate of 1000 lbs./hr. shall not exceed 2.34 lbs./hr.

b. Standard for Opacity [401 KAR 59:010, Section 3(1)(a)]:
The opacity of visible emissions from the stack shall not equal or exceed 20 percent.

Compliance Demonstration Method:

The source is assumed to be in compliance with both the emission standard and the standard for opacity when:

1) The filters are operated and maintained in accordance with the manufacturer's specifications and are in place at all times when the affected facility is in operation and;

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

2. Emission Limitations (Continued):

2) The unit exhausts inside the building.

c. Pursuant to 401 KAR 59:015, Section 4(1)(c), emissions of particulate matter (PM) shall not exceed 0.56 lb/MMBtu actual heat input for EP 07.

d. Pursuant to 401 KAR 59:015, Section 4(2), emissions shall not exceed 20% opacity for EP 07.

e. Pursuant to 401 KAR 59:015, Section 5(1)(c), sulfur dioxide (SO_2) emissions shall not exceed 3.0 lb/MMBtu actual heat input for EP 07.

Compliance Demonstration Method:

The unit is considered to be in compliance with the particulate, sulfur dioxide and opacity standards when burning natural gas.

f. See Section D for the source- wide VOC, HAP and PM emission limitations.

3. Testing Requirements:

Testing shall be conducted at such times as may be required by the cabinet in accordance with Regulations 401 KAR 59:005 Section 2(2) and 401 KAR 50:045 Section 4.

4. Specific Monitoring Requirements:

The twelve-month rolling total PM and HAP emissions shall be monitored monthly.

5. Specific Record Keeping Requirements:

a. The permittee shall keep monthly records of the volume of natural gas burned.

b. The permittee shall keep manufacturer's filter specifications for EP 21 on site and maintain records of filter replacement including the date.

c. VOC, PM and HAP emissions shall be calculated and recorded on a monthly basis.

d. A rolling 12 months summary for each month showing tons of VOC, HAPs and PM/PM_{10} emitted shall be recorded. In addition, these records shall show compliance with VOC, HAP and PM/PM_{10} emission listed in this permit.

e. The emission compliance records shall be maintained on site for a period of five years from the date the data was collected and shall be provided to the Division upon request.

6. Specific Reporting Requirements:

The permittee shall report the number of pounds of each powder coating applied, the amount of VOC's, PM and HAP's contained in the coatings, and the source wide monthly and twelve (12) month rolling total VOC, PM and HAPs emissions as part of the semiannual reporting as required in Section F (5) & (6).

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EU05

Emission Point	Description	Capacity	Construction	Control Device	Applicable Regulation
EP 30	Mast Powder Coat System	397 lbs/hr	2003	2-stage dry filter emitting back into the booth: 99.99%	401 KAR 59:010
EP 31	Mast Powder Coat Dry off Oven	3.2 MMBtu/hr Natural Gas Fired	2003	None	NA
EP 32	Mast Powder Coat Cure Oven	4.8 MMBtu/hr Natural Gas Fired	2003	None	NA
EP 33	Mast Powder Coat System Pretreat Wash Burner & Phosphatizing Agent	3.75 MMBtu/hr Natural Gas Fired & 0.475 gal/hr	2003	None	401 KAR 59:015

APPLICABLE REGULATIONS:

401 KAR 59:015, *New indirect heat exchangers*

401 KAR 59:010, *New process operations*

~~1.~~ **Operating Limitations:**

~~**401 KAR 59:010**~~

~~a. The rate of materials used in affected facilities shall not produce emissions which exceed the limitations as described in Section B(2) below.~~

401 KAR 59:015

b. Only natural gas shall be burned as fuel in EP 33.

2. Emission Limitations:

The affected facility operates and exhausts inside the building

a. Standard for Particulate Matter [401 KAR 59:010, Section 3(2)]:
Emissions of particulate matter from a control device or stack of any affected facility up to a process rate of 1000 lbs./hr. shall not exceed 2.34 lbs./hr.

b. Standard for Opacity [401 KAR 59:010, Section 3(1)(a)]:
The opacity of visible emissions from the stack shall not equal or exceed 20 percent.

Compliance Demonstration Method:

The source is assumed to be in compliance with both the emission standard and the standard for opacity when:

1) The filters are operated and maintained in accordance with the manufacturer's specifications and are in place at all times when the affected facility is in operation and;

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

2. Emission Limitations (Continued):

2) The unit exhausts inside the building.

c. Pursuant to 401 KAR 59:015, Section 4(1)(c), emissions of particulate matter (PM) shall not exceed 0.56 lb/MMBtu actual heat input for EP 33.

d. Pursuant to 401 KAR 59:015, Section 4(2), emissions shall not exceed 20% opacity for EP 33.

e. Pursuant to 401 KAR 59:015, Section 5(1)(c), sulfur dioxide (SO_2) emissions shall not exceed 3.0 lb/MMBtu actual heat input for EP 33.

Compliance Demonstration Method:

The unit is considered to be in compliance with the particulate, sulfur dioxide and opacity standards when burning natural gas.

f. See Section D for the source-wide VOC, HAP and PM emission limitations.

3. Testing Requirements:

Testing shall be conducted at such times as may be required by the cabinet in accordance with Regulations 401 KAR 59:005 Section 2(2) and 401 KAR 50:045 Section 4.

4. Specific Monitoring Requirements:

The twelve-month rolling total PM and HAP emissions shall be monitored monthly.

5. Specific Record Keeping Requirements:

a. The permittee shall keep monthly records of the volume of natural gas burned.

b. The permittee shall maintain records of filter replacement, including the date.

c. VOC, HAPs and PM/PM_{10} emissions shall be calculated and recorded on a monthly basis.

d. A rolling 12 months summary for each month showing tons of VOC, HAPs and PM/PM_{10} emitted shall be recorded. In addition, these records shall show compliance with VOC, HAP and PM/PM_{10} emission listed in this permit.

e. The permittee shall keep manufacturer's filter specifications on site.

f. The emission compliance records shall be maintained on site for a period of five years from the date the data was collected and shall be provided to the Division upon request.

6. Specific Reporting Requirements:

The permittee shall report the number of pounds of each powder coating applied, the amount of VOC's and HAP's contained in the coatings, and the source wide monthly and twelve (12) month rolling total VOC and HAPs emissions as part of the semiannual reporting as required in Section F (5) & (6).

SECTION B – EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Point	Description	Capacity	Construction	Control Device	Applicable Regulation
EU 07 (EP 11)	1-3 Ton Touch Up Paint Booth	2 Applicators at 5.7 gal/hr	1995	Dry Double filters: 95%	401 KAR 59:010 401 KAR 63:020
EU 07 (EP 37)	4-5 Ton Touch Up Paint Booth	2 Applicators at 5.7 gal/hr	1995	Dry Double filters: 95%	401 KAR 59:010 401 KAR 63:020
EU 08 (EP 12)	Specialty Touch Up Paint Booth	2 Applicators at 5.7 gal/hr	1996	Dry Double filters: 95%	401 KAR 59:010 401 KAR 63:020
EU 11 (EP 29)	6-9 Ton Touch Up Paint Booth	1 Applicator at 5.7 gal/hr	2000	Dry Double filters: 95%	401 KAR 59:010 401 KAR 63:020
EU 24 (EP 57)	A&N Paint System Touch Up Paint Booth #2	2 Applicators at 5.7 gal/hr	2023	Dry Double filters: 95%	401 KAR 59:010 401 KAR 63:020
EP 11, 37, 12, 29, 57	Clean-up Solvent	0.2 gal/hr each	N/A	None	None

APPLICABLE REGULATIONS:

401 KAR 59:010, *New process operations*

401 KAR 63:020, *Potentially hazardous matter or toxic substances*

1. **Operating Limitations:**

   The filters shall be in place and operated according to the manufacturer's specifications and recommendations at any time a given spray booth is in use.

2. **Emission Limitations:**

   a. The following emission limitations for particulate matter are pursuant to 401 KAR 59:010, Section 3 (2):

EMISSION UNIT	AFFECTED FACILITY	MAXIMUM CAPACITY (ton/hr)	MAXIMUM ALLOWABLE EMISSION RATE (lb/hr)
EP 11, EP 12, EP 29, EP 37, EP 57	Spray Coating Operation	0.17	2.34

SECTION B – EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission of particulate matter from a control device or stack of any affected facility up to a process rate of 1000 lbs/hr shall not exceed **2.34** lbs./hr.

Compliance Demonstration Method:

The source is assumed to be in compliance when the filters are in place and properly maintained. Refer to Subsection **4. Monitoring Requirements**.

2. Emission Limitations (Continued):

b. The opacity of visible emissions from each stack shall not equal or exceed 20 percent [401 KAR 59:010, Section 3 (1)].

Compliance Demonstration Method:

See **4. Monitoring Requirements** for opacity compliance demonstration.

c. See Section D for the source-wide VOC, HAPs and PM emission limitations.

d. Based upon the emission rates of toxics and hazardous air pollutants determined by the Cabinet using information provided in the application and supplemental information submitted by the source, the Cabinet determines the affected facility to be in compliance with 401 KAR 63:020.

3. Testing Requirements:

Testing shall be conducted at such times as may be required by the Cabinet in accordance with 401 KAR 59:005, Section 2(2) and 50:045, Section 4.

4. Specific Monitoring Requirements:

a. Compliance with the opacity standard shall be determined by the permittee performing a qualitative visual observation of the opacity of emissions at each stack no less than weekly and maintaining a log of the observations. If visible emissions from the stacks are seen (not including condensed water in the plume), then an inspection of process/control equipment shall be initiated and corrective action taken. If visible emissions are present after the corrective action, the permittee may determine the opacity using Reference Method 9.

b. The permittee shall install, calibrate, maintain and operate according to manufacturer's specifications a monitoring device (differential pressure gauges or manometers) to determine the pressure drop across the dry filters once a day during the operation of the spray booth. A permanent label displaying the operating range established for each collector shall be posted next to the selected instrument.

c. The twelve-month rolling total VOC, HAPs and PM emissions shall be monitored monthly.

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain a log of the visual observations noting date, time, initials of observers, and records of corrective actions taken as a result of visible emissions from a stack and records of any Reference Method 9 readings performed.

b. The permittee shall maintain records of calibration of the monitoring device and a log of the pressure drop readings across the filters, including the date, and dates of filter replacements. For any booth that is not in operation on a given date, this fact should also be noted.

c. The permittee shall keep manufacturer's filter specifications on site.

SECTION B – EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

d. Monthly records shall be kept of all materials used containing VOC, PM and HAP, including the product type, amount used and the weight percentages VOC, PM and all individual HAPs.

e. At the end of each month, VOC, PM and HAP emissions shall be calculated per Section D of this permit, and every month, a new 12-month rolling total for VOC, PM and HAP emissions shall be calculated.

6. Specific Reporting Requirements:

a. The permittee shall submit a copy of the control device inspection and repair log for those times when corrective actions are required due to an opacity exceedance and/or records of any Reference Method 9 opacity observations as noted in Section B (4) a. Copies of these records shall be submitted as a part of the semiannual reporting as required in Section F (5) & (6).

b. The permittee shall report the number of gallons of each coating applied, the amount of VOC's, PM and HAP's contained in the coatings, and the source wide monthly and twelve (12) month rolling total VOC, PM and HAP emissions as part of the semiannual reporting as required in Section F (5) & (6).

SECTION B – EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EU09

Emission Point	Description	Capacity	Construction	Control Device	Applicable Regulation
EP 01	Counterweight Paint Booth	3 Applicators at 5.7 gal/hr	1996	Three Stage Dry Filter: 99.5%	401 KAR 59:010, 401 KAR 63:020
EP 03	Counterweight Final Cure Oven	5.0 MMBtu/hr	2013	None	None
EP 45	Counterweight Preheat Oven	2.0 MMBtu/hr	2013	None	None
EP 01	Clean-up Solvent	0.2 gal/hr	N/A	None	None

APPLICABLE REGULATIONS:

401 KAR 59:010, *New process operations*

401 KAR 63:020, *Potentially hazardous matter or toxic substances*

1. **Operating Limitations:**

   The filters shall be in place and operated according to the manufacturer's specifications and recommendations at any time a given spray booth is in use.

2. **Emission Limitations:**

   a. The following emission limitations for particulate matter are pursuant to 401 KAR 59:010, Section 3 (2):

EMISSION POINT	AFFECTED FACILITY	MAXIMUM CAPACITY (ton/hr)	MAXIMUM ALLOWABLE EMISSION RATE (lb/hr)
EP 01	Spray Coating Operation	0.08	2.34

   Emission of particulate matter from a control device or stack of any affected facility up to a process rate of 1000 lbs/hr shall not exceed **2.34** lbs/hr.

   Compliance Demonstration Method:

   The source is assumed to be in compliance when the filters are in place and properly maintained. Refer to Subsection **4. Monitoring Requirements**.

   b. The opacity of visible emissions from each stack shall not equal or exceed 20 percent [401 KAR 59:010, Section 3 (1)].

   Compliance Demonstration Method:

   See **4. Monitoring Requirements** for opacity compliance demonstration.

SECTION B – EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

2. Emission Limitations (Continued):

c. See Section D for the source-wide VOC, HAPs and PM emission limitations.

d. Based upon the emission rates of toxics and hazardous air pollutants determined by the Cabinet using information provided in the application and supplemental information submitted by the source, the Cabinet determines the affected facility to be in compliance with 401 KAR 63:020.

3. Testing Requirements:

Testing shall be conducted at such times as may be required by the Cabinet in accordance with 401 KAR 59:005, Section 2(2) and 50:045, Section 4.

4. Specific Monitoring Requirements:

a. Compliance with the opacity standard shall be determined by the permittee performing a qualitative visual observation of the opacity of emissions at each stack no less than weekly and maintaining a log of the observations. If visible emissions from the stacks are seen (not including condensed water in the plume), then an inspection of process/control equipment shall be initiated and corrective action taken. If visible emissions are present after the corrective action, the permittee may determine the opacity using Reference Method 9.

b. The permittee shall install, calibrate, maintain and operate according to manufacturer's specifications a monitoring device (differential pressure gauges or manometers) to determine the pressure drop across the dry filters once a day during the operation of the spray booth. A permanent label displaying the operating range established for each collector shall be posted next to the selected instrument.

c. The twelve-month rolling total VOC, HAPs and PM emissions shall be monitored monthly.

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain a log of the visual observations, records of corrective actions taken as a result of visible emissions from a stack and records of any Reference Method 9 readings performed.

b. The permittee shall maintain records of calibration of the monitoring device and a log of the pressure drop readings across the filters, including the date, and dates of filter replacements. For any booth that is not in operation on a given date, this fact should also be noted.

c. The permittee shall keep manufacturer's filter specifications on site.

d. Monthly records shall be kept of all materials used containing VOC, HAPs and PM, including the product type, amount used and the weight percentages VOC, PM and all individual HAPs.

SECTION B – EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

e. At the end of each month, VOC, PM and HAP emissions shall be calculated per Section D of this permit, and every month, a new 12-month rolling total for VOC, PM and HAP emissions shall be calculated.

f. The permittee shall maintain monthly records of the volume of natural gas burned. The volume of natural gas in million cubic feet ($MMft^3$) shall be multiplied by the appropriate AP-42 emission factor to determine VOC and PM/PM_{10} emissions from natural gas combustion.

6. Specific Reporting Requirements:

a. The permittee shall submit a copy of the control device inspection and repair log for those times when corrective actions are required due to an opacity exceedance and/or records of any Reference Method 9 opacity observations as noted in Section B (4) a. Copies of these records shall be submitted as a part of the semiannual reporting as required in Section F (5) & (6).

b. The permittee shall report the number of gallons of each coating applied, the amount of VOC's, HAPs and PM contained in the coatings, and the source wide monthly and twelve (12) month rolling total VOC, HAPs and PM emissions as part of the semiannual reporting as required in Section F (5) & (6).

SECTION B – EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EU12

Emission Point	Description	Capacity	Construction	Control Device	Applicable Regulation
EP 34	Pangborn PC4-16 Shot Blast	424 lb/hr	2003	Cartridge filters: 95.62%	401 KAR 59:010

APPLICABLE REGULATIONS:

401 KAR 59:010, *New process operations*

1. **Operating Limitations:**

   ~~**a.** The usage of raw materials in the affected facility shall be limited so that the emissions limitations set forth in item 2, below, are not exceeded.~~

   b. Cartridge Filters shall be in place and operational at all times when Shot Blast operations are taking place.

2. **Emission Limitations:**

   401 KAR 59:010, Section 3

   a. For emissions from a control device or stack no person shall cause, suffer, allow orpermit the emission into the open air of particulate matter from any affected facility which is in excess of 2.34 pounds/hour.

   Compliance Demonstration Method:

   To determine particulate emissions from abrasive metal cleaning operations:
   Average Particulate Emission Rate (lbs per hour) = Steel Shot usage rate (tons per month) x emission factor (8 lbs. per ton of shot used) x (1- Control Efficiency) / hours of operation (hours per month).

   b. The opacity of visible emissions from each stack shall not equal or exceed 20 percent [401 KAR 59:010, Section 3 (1)].

   Compliance Demonstration Method:

   See **4. Monitoring Requirements** for opacity compliance demonstration.

   c. See Section D for the source-wide PM emission limitations.

3. **Testing Requirements:**

   Testing shall be conducted at such times as may be required by the cabinet in accordance with Regulations 401 KAR 59:005 Section 2(2) and 401 KAR 50:045 Section 4.

4. **Specific Monitoring Requirements:**

   a. Compliance with the opacity standard shall be determined by the permittee performing a qualitative visual observation of the opacity of emissions at each stack during daylight hours no less than weekly and maintaining a log of the observations. If visible emissions

SECTION B – EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Specific Monitoring Requirements (Continued):

from the stacks are seen (not including condensed water in the plume), then an inspection of process/control equipment shall be initiated and corrective action taken. If visible emissions are present after the corrective action, the permittee may determine the opacity using Reference Method 9.

b. The permittee shall install, calibrate, maintain and operate according to manufacturer's specifications a monitoring device (differential pressure gauges or manometers) to determine the pressure drop across the filters once a day during the operation of the shot blast. A permanent label displaying the operating range established for each collector shall be posted next to the selected instrument.

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain a log of the visual observations noting date, time and initials of observers, records of corrective actions taken as a result of visible emissions from a stack and records of any Reference Method 9 readings performed.

b. The permittee shall maintain records of calibration of the monitoring device and a log of the pressure drop readings across the filters, including the date, and dates of filter replacements. For any booth that is not in operation on a given date, this fact should also be noted.

c. The permittee shall keep manufacturer's filter specifications on site.

d. The permittee shall maintain monthly records of the purchase and usage of blasting media. PM/PM_{10} emissions shall be calculated and recorded on a *monthly* basis. These records shall be summarized in tons per month PM/PM_{10} emissions; subsequently, tons of PM/PM_{10} emissions per rolling 12-month period shall be recorded. In addition, these records shall demonstrate compliance with PM/PM_{10} emission limitations listed herein for the conditional major limitations. These records shall be maintained on site for a period of five years from the date the data was collected and shall be provided to the Division upon request.

6. Specific Reporting Requirements:

The permittee shall submit, within 30 days following the end of each calendar half, an emissions calculation worksheet, which utilizes emission factors from technical references approved by the Division. These worksheets shall be submitted in a printed or electronic form and shall serve as the method of determining compliance with 401 KAR 52:030 and 401 KAR 59:010.

SECTION B – EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EU13 (EP35) Paint Mix Room

APPLICABLE REGULATIONS:

401 KAR 63:020, *Potentially hazardous matter or toxic substances*

1. **Operating Limitations:**

   The lids on paint containers shall be closed at all times except when transferring paint to and from the container**.**

2. **Emission Limitations:**

   a. Based upon the emission rates of toxics and hazardous air pollutants determined by the Cabinet using information provided in the application and supplemental information submitted by the source, the Cabinet determines the affected facility to be in compliance with 401 KAR 63:020.

   b. See Section D for the source-wide VOC and HAPs emission limitations.

3. **Testing Requirements:**

   Testing shall be conducted at such times as may be required by the Cabinet in accordance with 401 KAR 59:005, Section 2(2) and 50:045, Section 4.

4. **Specific Monitoring Requirements:**

   The Paint Mix room shall be monitored daily to ensure compliance with the **Paint Mix Room Operating Limitation**.

5. **Specific Record Keeping Requirements:**

   A daily log shall be kept detailing all instances of noncompliance with the **Paint Mix Room Operating Limitations.**

6. **Specific Reporting Requirements:**

   N/A

SECTION B – EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Point	Description	Capacity	Construction	Control Device	Applicable Regulation
EU 16 (EP 39)	CI Diesel Engine for Fire Pump at the Lake	0.28 MMBtu/hr., 111 hp	1971	None	40 CFR 63 Subpart ZZZZ
EU 17 (EP40)	CI Diesel Engine for Fire Pump at the Tank	0.44 MMBtu/hr., 174 hp	1978	None	40 CFR 63 Subpart ZZZZ
EU 18 (EP 41)	CI Emergency Generator at Boiler Room	0.05 MMBtu/hr., 20 hp	1999	None	40 CFR 63 Subpart ZZZZ
EU 19 (EP 42)	SI Emergency Generator at Main Shop	0.05 MMBtu/hr., 20 hp Natural Gas	1999	None	40 CFR 63 Subpart ZZZZ
EU 20 (EP 43)	SI Emergency Generator at the Boiler Room	0.05 MMBtu/hr., 20 hp Natural Gas	1999	None	40 CFR 63 Subpart ZZZZ
EU 21 (EP 44)	SI Emergency Generator for MIS	0.012 MMBtu/hr., 5 hp Natural Gas	2006	None	40 CFR 63 Subpart ZZZZ

APPLICABLE REGULATIONS:

401 KAR 63:002, Section 2(4)(eeee), 40 C.F.R. 63.6580 to 63.6675, Tables 1a to 8, and Appendix A (Subpart ZZZZ), *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*

Note: D.C. Circuit Court [*Delaware v. EPA*, 785 F. 3d 1 (D.C. Cir. 2015)] has vacated the provisions in 40 CFR 63, Subpart ZZZZ that contain the 100-hour exemption for operation of emergency engines for purposes of emergency demand response under 40 CFR 63.6640(f)(2)(ii)-(iii). The D.C. Circuit Court issued the mandate for the vacatur on May 4, 2016.

1. **Operating Limitations:**

   For each unit the permittee shall:

   a. Change oil and filter every 500 hours of operation or annually, whichever comes first;

   b. Inspect air cleaner or spark plugs every 1,000 hours of operation or annually, whichever comes first; and

   c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

   d. Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-start emission limitations apply.

SECTION B – EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

1. Operating Limitations (Continued):

Compliance Demonstration

1) The permittee must operate and maintain the stationary RICE according to the manufacturer's emission-related operating and maintenance instructions, or develop and follow your own maintenance plan which must provide, to the extent practicable, for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR 63.6625(e)]
2) Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 (fifty) hours per year is prohibited. If the engine is not operated according to the requirements below, the engine will not be considered an emergence engine and will need to meet all requirements for non-emergency engines [40 CFR 63.6640(f)]:
   i. There is no limit on the use of emergency RICE in emergency situations.
   ii. Maintenance checks and readiness testing of these units is limited to 100 hours per year.
   iii. You many operate your emergency RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity, except for the 15 hours provided for demand response in accordance with 40 CFR 63.6640(f)(iii).

e. The permittee must be in compliance with the emission limitations and operating limitations that apply at all times. [40 CFR 63.6605(a)]

2. Emission Limitations:

See Section D for the source-wide VOC, HAPs and PM emission limitations.

3. Testing Requirements:

Testing shall be conducted at such times as may be required by the Cabinet in accordance with 401 KAR 59:005 section 2(2) and 50:045 section 4.

4. Specific Monitoring Requirements:

a. The permittee shall install a non-resettable hour meter if one is not already installed [40 CFR 63.6625(f)].

b. As an alternative to the requirement to change the oil every 500 hours of operation or annually, the permittee has the option of utilizing an oil analysis program, according to the methods and requirements in 40 CFR 63.6625(i), in order to extend the specified oil change requirements. [40 CFR 63.6625(i)]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Recordkeeping Requirements:

a. The permittee must keep records of each notification and report that is submitted, the occurrence and duration of each malfunction of operation or the air pollution control and monitoring equipment, records of performance tests and performance evaluations as required in 40 CFR 63.10(b)(2)(viii), records of all required maintenance performed on the air pollution control and monitoring equipment, and records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [40 CFR 60.6655(a)]

b. The permittee shall maintain records of the maintenance conducted on the engine in order to demonstrate that the engine was operated and maintained, including any after-treatment control device, according to the maintenance plan for the engine. [40 CFR 63.6655(e)]

c. If an engine is not certified to the standards applicable to non-emergency engines (see Table 2d to 40 CFR 63 Subpart ZZZZ), then the permittee must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation; including, what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for demand respond, records must be kept of the notification of the emergency situation, and the time the engine was operated as part of demand response. [40 CFR 63.6655(f)(2)]

6. Specific Reporting Requirements:

a. The Permittee must report each instance in which the operating limitations in Subsection 1 have not been met. These instances are deviations from the emission and operating limitation in 40 CFR 63 Subpart ZZZZ and must be reported according to 40 CFR 63.6650. [40 CFR 63.6640(b)]

b. The Permittee must report each instance in which the requirements of Table 8 to 40 CFR 63 Subpart ZZZZ, that apply, have not been met [40 CFR 63.6640(e)]. The notifications listed in 40 CFR 63.7(b) and (c), 40 CFR 63.8(e), (f)(4) and (f)(6), 40 CFR 63.9(b) through (e), and (g) are not required. [40 CFR 63.6645(a)(5)]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EU22

Emission Point	Description	Capacity	Construction	Control Device	Applicable Regulation
EP 46	Gasoline Tank and Gasoline Dispenser	1000 Gallons stored 42,700 gal/yr	1997	None	**40 CFR 63 Subpart CCCCCC**

APPLICABLE REGULATIONS:

401 KAR 63:002, Section 2(4)(ddddd), 40 C.F.R. 63.11110 to 63.11132, Tables 1 to 3 (Subpart CCCCCC), *National Emissions Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities.*

1. **Operating Limitations:**

   If the source`s GDF has a monthly throughput of less than 10,000 gallons of gasoline, then the permittee shall comply with the following Compliance Demonstration Method.[40 CFR 63.11111(b)]

   Compliance Demonstration Method:

   The permittee shall not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following [40 CFR 63.11116]:

   a. Minimize gasoline spills;

   b. Clean up spills as expeditiously as practicable;

   c. Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasket seal when not in use;

   d. Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

2. **Emission Limitations:**

   None

3. **Testing Requirements:**

   Testing shall be conducted at such times as may be required by the Cabinet in accordance with 401 KAR 59:005 Section 2(2) and 50:045 Section 4.

4. **Monitoring Requirements:**

   The permittee must monitor gallons of gasoline used per month to verify it is less than 10,000 gallons.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Record Keeping Requirements:

The permittee is not required to submit notifications or reports as specified in 40 CFR 63.11125 and 63.11126, but the permittee shall have records available within 24 hours of a request by the Division to document the source's gasoline throughput. [40 CFR 63.11116(b)]

6. Specific Reporting Requirements:

None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EU23

Emission Point	Description	Capacity	Construction	Control Device	Applicable Regulation
EP 48	A&N Paint System Powder Shot Blast Unit	180 lb./hr.	2019	Cartridge filter (95%)	401 KAR 59:010

APPLICABLE REGULATIONS:

401 KAR 59:010, *New process operations*

1. **Operating Limitations:**

   ~~a. The usage of raw materials in the affected facility shall be limited so that the emissions limitations set forth in item 2, below, are not exceeded.~~

   b. Cartridge Filters shall be in place and operational at all times when Shot Blast operations are taking place.

2. **Emission Limitations:**

   401 KAR 59:010, Section 3

   a. For emissions from a control device or stack no person shall cause, suffer, allow orpermit the emission into the open air of particulate matter from any affected facility which is in excess of 2.34 pounds/hour.

   Compliance Demonstration Method:

   To determine particulate emissions from abrasive metal cleaning operations:
   Average Particulate Emission Rate (lbs. per hour) = Steel Shot usage rate (tons per month) x emission factor (8 lbs. per ton of shot used) x (1- Control Efficiency) / hours of operation (hours per month).

   b. The opacity of visible emissions from each stack shall not equal or exceed 20 percent [401 KAR 59:010, Section 3 (1)].

   Compliance Demonstration Method:

   See **4. Monitoring Requirements** for opacity compliance demonstration.

   c. See Section D for the source-wide PM emission limitations.

3. **Testing Requirements:**

   Testing shall be conducted at such times as may be required by the cabinet in accordance with Regulations 401 KAR 59:005 Section 2(2) and 401 KAR 50:045 Section 4.

4. **Specific Monitoring Requirements:**

   a. Compliance with the opacity standard shall be determined by the permittee performing a qualitative visual observation of the opacity of emissions at each stack during daylight hours no less than weekly and maintaining a log of the observations. If visible emissions

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Specific Monitoring Requirements (Continued):

from the stacks are seen (not including condensed water in the plume), then an inspection of process/control equipment shall be initiated and corrective action taken. If visible emissions are present after the corrective action, the permittee may determine the opacity using Reference Method 9.

b. The permittee shall install, calibrate, maintain and operate according to manufacturer's specifications a monitoring device (differential pressure gauges or manometers) to determine the pressure drop across the filters once a day during the operation of the shot blast. A permanent label displaying the operating range established for each collector shall be posted next to the selected instrument.

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain a log of the visual observations noting date, time and initials of observers, records of corrective actions taken as a result of visible emissions from a stack and records of any Reference Method 9 readings performed.

b. The permittee shall maintain records of calibration of the monitoring device and a log of the pressure drop readings across the filters, including the date, and dates of filter replacements. For any unit that is not in operation on a given date, this fact should also be noted.

c. The permittee shall keep manufacturer's filter specifications on site.

d. The permittee shall maintain monthly records of the purchase and usage of blasting media. PM/PM_{10} emissions shall be calculated and recorded on a *monthly* basis. These records shall be summarized in tons per month PM/PM_{10} emissions; subsequently, tons of PM/PM_{10} emissions per rolling 12-month period shall be recorded. In addition, these records shall demonstrate compliance with PM/PM_{10} emission limitations listed herein for the conditional major limitations. These records shall be maintained on site for a period of five years from the date the data was collected and shall be provided to the Division upon request.

6. Specific Reporting Requirements:

The permittee shall submit, within 30 days following the end of each calendar half, an emissions calculation worksheet, which utilizes emission factors from technical references approved by the Division. These worksheets shall be submitted in a printed or electronic form and shall serve as the method of determining compliance with 401 KAR 52:030 and 401 KAR 59:010.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EU23

Emission Point	Description	Capacity	Construction	Control Device	Applicable Regulation
EP 49	A&N Paint System Powder Pre-Treatment Parts Washer Burner & Phosphatizing Agent	2.5 MMBtu/hr. Natural Gas Fired & 0.475 gals/hr	2019	None	401 KAR 59:015
EP 50	A&N Paint System Powder Dry-off Oven	2.24 MMBtu/hr. Natural Gas Fired	2019	None	N/A
EP 51	A&N Paint System Powder Booth- Black	1270 lb./hr.	2019	Cartridge Filter emitting into building: (99.89%)	401 KAR 59:010
EP 52	A&N Paint System Powder Booth- Yellow	1270 lb./hr.	2019	Cartridge Filter emitting into building: (99.89%)	401 KAR 59:010
EP 53	A&N Paint System Powder Booth- Gold	1270 lb./hr.	2019	Cartridge Filter emitting into building: (99.89%).	401 KAR 59:010
EP 54	A&N Paint System Powder Booth- Custom Touch-Up	477 lb./hr.	2019	Cartridge Filter emitting into building: (99.89%)	401 KAR 59:010
EP 55	A&N Paint System Powder Cure Oven 1	4.3 MMBtu/hr. Natural Gas Fired	2019	None	N/A
EP 56	A&N Paint System Powder Cure Oven 2	4.3 MMBtu/hr. Natural Gas Fired	2019	None	N/A

APPLICABLE REGULATIONS:

401 KAR 59:015, *New indirect heat exchangers*

401 KAR 59:010, *New process operations*

~~1.~~ Operating Limitations:

~~401 KAR 59:010~~

~~a. The rate of materials used in affected facility shall not produce emissions which exceed the limitations as described in Section B(2) below.~~

401 KAR 59:015

b. Only natural gas shall be burned as fuel in EP 49.

2. Emission Limitations:

The affected facility operates and exhausts inside the building

a. Standard for Particulate Matter [401 KAR 59:010, Section 3(2)]:

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

2. Emission Limitations (Continued):

Emissions of particulate matter from a control device or stack of any affected facility up to a process rate of 1000 lbs./hr. shall not exceed 2.34 lbs./hr.

b. Standard for Opacity [401 KAR 59:010, Section 3(1)(a)]:
The opacity of visible emissions from the stack shall not equal or exceed 20 percent.

Compliance Demonstration Method:

The source is assumed to be in compliance with both the emission standard and the standard for opacity when:
1) The filters are operated and maintained in accordance with the manufacturer's specifications and are in place at all times when the affected facility is in operation and;
2) The unit exhausts inside the building.

c. Pursuant to 401 KAR 59:015, Section 4(1)(c), emissions of particulate matter (PM) shall not exceed 0.54 lb./MMBtu actual heat input for EP 49.

d. Pursuant to 401 KAR 59:015, Section 4(2), emissions shall not exceed 20% opacity for EP 49.

e. Pursuant to 401 KAR 59:015, Section 5(1)(c), sulfur dioxide (SO_2) emissions shall not exceed 2.85 lb./MMBtu actual heat input for EP 49.

Compliance Demonstration Method:

The unit is considered to be in compliance with the particulate, sulfur dioxide and opacity standards when burning natural gas.

f. See Section D for the source–wide VOC, HAP and PM emission limitations.

3. Testing Requirements:

Testing shall be conducted at such times as may be required by the cabinet in accordance with Regulations 401 KAR 59:005 Section 2(2) and 401 KAR 50:045 Section 4.

4. Specific Monitoring Requirements:

The twelve-month rolling total PM and VOC emissions shall be monitored monthly.

5. Specific Record Keeping Requirements:

a. The permittee shall keep monthly records of the volume of natural gas burned.

b. VOC and PM emissions shall be calculated and recorded on a monthly basis.

c. A rolling 12 months summary for each month showing tons of VOC and PM/PM_{10} emitted shall be recorded. In addition, these records shall show compliance with VOC and PM/PM_{10} emissions listed in this permit.

d. The permittee shall keep manufacturer's filter specifications on site and maintain records of filter replacement, including the date.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Record Keeping Requirements (Continued):

e. The emission compliance records shall be maintained on site for a period of five years from the date the data was collected and shall be provided to the Division upon request.

6. Specific Reporting Requirements:

The permittee shall report the number of pounds of each powder coating applied, the amount of VOC's and PM contained in the coatings, and the source wide monthly and twelve (12) month rolling total VOC and PM emissions as part of the semiannual reporting as required in Section F (5) & (6).

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:030, Section 6. Although these activities are designated as insignificant the permittee must comply with the applicable regulation. Process and emission control equipment at each insignificant activity subject to an opacity standard shall be inspected monthly and a qualitative visible emissions evaluation made. Results of the inspection, evaluation, and any corrective action shall be recorded in a log.

Description	Generally Applicable Regulation
~~**1.** Small Parts Wash Tanks~~	~~NA~~
2. Hot Water Heater for Steam Cleaner	NA
3. Welders	401 KAR 59:010 401 KAR 63:020
4. Battery Chargers	NA
5. Sanders	401 KAR 59:010
6. Internal Recirculating Sanding System	401 KAR 59:010
7. Two Counterweight Hand Sander with Control Filter	401 KAR 59:010
8. Counterweight Flash Tunnel (EP04)	NA
9. Flash Tunnels #1 & #2 (EP18)	NA
10. 3.2 MMBtu/hr. Burn Off Oven (3 burners, 1.2, 1.2 and 0.8 MMBtu/hr)	401 KAR 59:010
11. Cup Dispense Spray Guns	401 KAR 59:010
12. Gravimetric lab for determining the mass of contaminant on parts – maximum of 2 gal/day of solvent	NA
13. Gear Oil AST (2) – 1,500 gallons	NA
14. Gear Oil AST – 1,000 gallons	NA
15. Motor Oil AST – 1,000 gallons	NA
16. Antifreeze AST – 2,000 gallons	NA
17. Diesel Fuel AST – 5,000 gallons	NA
18. Diesel Fuel AST – 550 gallons	NA

SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)

19. Hydraulic Oil AST – 10,000 gallons NA

20. Transmission Fluid AST – 3,000 gallons NA

21. Counterweight Paint Mix Room NA

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.

2. VOC, HAPs and PM emissions, measured by applicable reference methods, or an equivalent or alternative method specified in 40 C.F.R. Chapter I, or by a test method specified in the state implementation plan shall not exceed the respective limitations specified herein.

a. Source wide emissions of VOC shall not exceed ninety (90) tons during any consecutive twelve (12) months period.

Compliance Demonstration Method:

$$\text{Monthly VOC Emissions} = \sum_{i=1}^{n} M_i \rho_i$$

Where;

ρ = weight percent of VOC in each solvent containing material less water and/or exempt solvent used during the month, (lbs/lb).
i = individual solvent containing material (i.e. primer, enamel and thinner, etc.)
n = total number of solvent containing materials used
M = pounds of solvent containing material "i " used

Source-wide VOC emissions = Σ [VOC emissions from spray coating operations] + Σ [VOC emissions from paint purging] + Σ [VOC emissions from natural gas and diesel combustion units] + Σ [VOC emissions from Insignificant Activities, if applicable]

b. Source wide emissions of Single HAP shall not exceed nine (9) tons during any consecutive twelve (12) months period, except for Naphthalene, Cobalt and Ethyl Benzene. Source wide emissions of Naphthalene shall not exceed 183 lbs. per year, Cobalt shall not exceed 0.7 lbs. per year and Ethyl Benzene shall not exceed 2500 lbs. per year.

Compliance Demonstration Method:

$$\text{Monthly HAP Emissions; } HAP_j = \sum_{i=1}^{n} M_i \rho_i$$

Where;

ρ = weight percent of HAP_j in material "i", (lbs/lb).
i = individual HAP containing material (i.e. primer, enamel and thinner, etc.)
j = individual HAP emission (i.e. naphthalene, xylene, etc.)
n = total number of solvent containing materials used containing single HAP_j
M = pounds of solvent containing material "i " used

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

$$\text{Monthly Cobalt Emissions} = \sum_{i=1}^{n} M_i \rho_i \text{ x } (1 - \text{T.E.}/100) \text{ x } (1 - \text{C.E.}/100)$$

Where;

ρ = weight percent of cobalt in material "i", (lbs/lb).
i = individual HAP containing material.
n = total number of solvent containing materials used containing cobalt
M = pounds of solvent containing material "i " used
T.E. = transfer efficiency of the application equipment (%)
C.E. = control efficiency of the PM/PM_{10} control equipment (%)

Source-wide HAP emissions = Σ [HAP emissions from spray painting operations] + Σ [HAP emissions from Insignificant Activities]

c. Source wide emissions of Combined HAPs shall not exceed (22.5) tons during any consecutive twelve (12) months period.

Compliance Demonstration Method:

$$\text{Combined HAP Emissions} = \sum_{j=1}^{m} HAP_j$$

Where; j = individual HAP emission (i.e. xylene, etc.)
m = total number of single HAP emissions

d. Source wide emissions of PM/PM_{10} shall not exceed 90 tons during any consecutive twelve (12) month period. Monthly records to demonstrate compliance with this limitation shall be maintained and total PM/PM_{10} emissions shall be reported on a semi-annual basis. Total PM/PM_{10} emissions shall include insignificant activities.

Compliance Demonstration Method:

PM/PM_{10} emitted (lbs/month) from painting operations = E_{PM}

$$E_{PM} = \sum [Q * C_{PM} * (1 - \text{T.E.}/100) * (1 - \text{C.E.}/100)]$$

Where:

E_{PM} = PM/PM_{10} emissions (lb/month)
Q = Usage rate of material (gal/month)
C_{PM} = PM/PM_{10} or solids content of material (lb/gal)
T.E. = Transfer efficiency of the application equipment (%)
C.E. = Control efficiency of the PM/PM_{10} abatement equipment (%)

Source-wide PM/PM_{10} emissions = $\sum$ [PM/PM_{10} emissions from painting operations] + $\sum$ [PM/PM_{10} emissions from natural gas and diesel combustion] + $\sum$ [PM/PM_{10} emissions from abrasive cleaning of metal parts]

e. Compliance with annual limits is based on a rolling twelve months total. Emissions shall be calculated on a monthly basis and shall be added to previous eleven months emissions to get a total of actual emissions for each consecutive twelve (12) month period.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b-IV-1 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:

a. Date, place (as defined in this permit), and time of sampling or measurements;

b. Analyses performance dates;

c. Company or entity that performed analyses;

d. Analytical techniques or methods used;

e. Analyses results; and

f. Operating conditions during time of sampling or measurement.

2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five (5) years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [401 KAR 52:030, Section 3(1)(f)1a, and Section 1a-7 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26].

3. In accordance with the requirements of 401 KAR 52:030, Section 3(1)f, the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:

a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;

b. To access and copy any records required by the permit;

c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.

4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

5. Summary reports of any monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Sections 1b-V-1 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26].

6. The semi-annual reports are due by January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:030, Section 22. If continuous emission and opacity monitors are required by regulation or this permit, data shall be reported in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All deviations from permit requirements shall be clearly identified in the reports.

7. In accordance with the provisions of 401 KAR 50:055, Section 1, the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:

a. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.

b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.

8. The permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken shall be submitted to the Regional Office listed on the front of this permit. Where the underlying applicable requirement contains a definition of prompt or otherwise specifies a time frame for reporting deviations, that definition or time frame shall govern. Where the underlying applicable requirement does not identify a specific time frame for reporting deviations, prompt reporting, as required by Sections 1b-V, 3 and 4 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26 shall be defined as follows:

a. For emissions of a hazardous air pollutant or a toxic air pollutant (as identified in an applicable regulation) that continue for more than an hour in excess of permit requirements, the report must be made within 24 hours of the occurrence.

b. For emissions of any regulated air pollutant, excluding those listed in F.8.a., that continue for more than two hours in excess of permit requirements, the report must be made within 48 hours.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

c. All deviations from permit requirements, including those previously reported, shall be included in the semiannual report required by F.6.

9. Pursuant to 401 KAR 52:030, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit in accordance with the following requirements:

a. Identification of each term or condition;

b. Compliance status of each term or condition of the permit;

c. Whether compliance was continuous or intermittent;

d. The method used for determining the compliance status for the source, currently and over the reporting period.

e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.

f. .The certification shall be submitted by January 30th of each year. Annual compliance certifications shall be sent to the Division for Air Quality, Frankfort Regional Office, 300 Sower Blvd, Frankfort, KY 40601.

10. In accordance with 401KAR 52:030, Section 3(1)(d), the permittee shall provide the Division with all information necessary to determine its subject emissions within 30 days of the date the Kentucky Emissions Inventory System (KYEIS) emissions survey is mailed to the permittee. If a KYEIS emissions survey is not mailed to the permittee, then the permittee shall comply with all other emissions reporting requirements in this permit.

11. The Cabinet may authorize the temporary use of an emission unit to replace a similar unit that is taken off-line for maintenance, if the following conditions are met:

a. The owner or operator shall submit to the Cabinet, at least ten (10) days in advance of replacing a unit, the appropriate Forms DEP7007AI to DD that show:
   1) The size and location of both the original and replacement units; and
   2) Any resulting change in emissions;

b. The potential to emit (PTE) of the replacement unit shall not exceed that of the original unit by more than twenty-five (25) percent of a major source threshold, and the emissions from the unit shall not cause the source to exceed the emissions allowable under the permit;

c. The PTE of the replacement unit or the resulting PTE of the source shall not subject the source to a new applicable requirement;

d. The replacement unit shall comply with all applicable requirements; and

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

e. The source shall notify Regional office of all shutdowns and start-ups.

f. Within six (6) months after installing the replacement unit, the owner or operator shall:
   1) Re-install the original unit and remove or dismantle the replacement unit; or
   2) Submit an application to permit the replacement unit as a permanent change.

SECTION G - GENERAL PROVISIONS

1. General Compliance Requirements

a. The permittee shall comply with all conditions of this permit. A noncompliance shall be a violation of 401 KAR 52:030, Section 3(1)(b), and a violation of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act). Noncompliance with this permit is grounds for enforcement action including but not limited to the termination, revocation and reissuance, revision, or denial of a permit [Section 1a-2 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26].

b. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a-5 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26].

c. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:030, Section 18. The permit will be reopened for cause and revised accordingly under the following circumstances:
   1) If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:030, Section 12;
   2) The Cabinet or the United States Environmental Protection Agency (U. S. EPA) determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
   3) The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

   Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

d. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the conditions of this permit [Sections 1a- 6 and 7 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26].

e. Emission units described in this permit shall demonstrate compliance with applicable requirements if requested by the Division [401 KAR 52:030, Section 3(1)(c)].

SECTION G - GENERAL PROVISIONS (CONTINUED)

f. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the permitting authority [401 KAR 52:030, Section 7(1)].

g. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a-11 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26].

h. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a-3 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26].

i. All emission limitations and standards contained in this permit shall be enforceable as a practical matter. All emission limitations and standards contained in this permit are enforceable by the U.S. EPA and citizens except for those specifically identified in this permit as state-origin requirements. [Section 1a-12 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26].

j. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a-9 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26].

k. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:030, Section 11(3)].

l. This permit does not convey property rights or exclusive privileges [Section 1a-8 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26].

m. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.

n. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry.

o. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders.

SECTION G - GENERAL PROVISIONS (CONTINUED)

p. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.

q. Pursuant to 401 KAR 52:030, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with:
   1) Applicable requirements that are included and specifically identified in this permit; and
   2) Non-applicable requirements expressly identified in this permit.

2. Permit Expiration and Reapplication Requirements

a. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six (6) months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:030, Section 12].

b. The authority to operate granted through this permit shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:030, Section 8(2)].

3. Permit Revisions

a. Minor permit revision procedures specified in 401 KAR 52:030, Section 14(3), may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the State Implementation Plan (SIP) or in applicable requirements and meet the relevant requirements of 401 KAR 52:030, Section 14(2).

b. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

SECTION G - GENERAL PROVISIONS (CONTINUED)

4. Construction, Start-Up, and Initial Compliance Demonstration Requirements

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the construction of the equipment described herein, emission unit, EU24 (EP 57) in accordance with the terms and conditions of this permit (F-XX-XXX).

a. Construction of any process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.

b. Within thirty (30) days following commencement of construction and within fifteen (15) days following start-up and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Regional Office listed on the front of this permit in writing, with a copy to the Field Office Branch of the Frankfort Central Office, notification of the following:
   1) The date when construction commenced.
   2) The date of start-up of the affected facilities listed in this permit.
   3) The date when the maximum production rate specified in the permit application was achieved.

c. Pursuant to 401 KAR 52:030, Section 3(2), unless construction is commenced within eighteen (18) months after the permit is issued, or begins but is discontinued for a period of eighteen (18) months or is not completed within a reasonable timeframe then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon written request, the Cabinet may extend these time periods if the source shows good cause.

d. For those affected facilities for which construction is authorized by this permit, a source shall be allowed to construct with the draft permit. Pursuant to 401 KAR 50:055, Section 2(1)(a), an owner or operator of any affected facility subject to any standard within the administrative regulations of the Division for Air Quality shall demonstrate compliance with the applicable standard(s) within sixty (60) days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial start-up of such facility. Pursuant to 401 KAR 52:030, Section 3(3)(c), sources that have not demonstrated compliance within the timeframes prescribed in 401 KAR 50:055, Section 2(1)(a), shall operate the affected facility only for purposes of demonstrating compliance unless authorized under an approved compliance plan or an order of the cabinet.

e. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. Testing must also be conducted in accordance with General Provisions G.5 of this permit.

SECTION G - GENERAL PROVISIONS (CONTINUED)

5. Testing Requirements

a. Pursuant to 401 KAR 50:045, Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least Thirty (30) days prior to the test.

b. Pursuant to 401 KAR 50:045, Section 5, in order to demonstrate that a source is capable of complying with a standard at all times, any required performance test shall be conducted under normal conditions that are representative of the source's operations and create the highest rate of emissions. If [When] the maximum production rate represents a source's highest emissions rate and a performance test is conducted at less than the maximum production rate, a source shall be limited to a production rate of no greater than 110 percent of the average production rate during the performance tests. If and when the facility is capable of operation at the rate specified in the application, the source may retest to demonstrate compliance at the new production rate. The Division for Air Quality may waive these requirements on a case-by-case basis if the source demonstrates to the Division's satisfaction that the source is in compliance with all applicable requirements.

c. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days or sooner if required by an applicable standard, after the completion of the fieldwork.

6. Acid Rain Program Requirements

If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

7. Emergency Provisions

a. Pursuant to 401 KAR 52:030, Section 23(1), an emergency shall constitute an affirmative defense to an action brought for noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or other relevant evidence that:
   1) An emergency occurred and the permittee can identify the cause of the emergency;
   2) The permitted facility was at the time being properly operated;
   3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and,
   4) The permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division within two (2) working days of the time when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and the corrective actions taken.
   5) Notification of the Division does not relieve the source of any other local, state or federal notification requirements.

SECTION G - GENERAL PROVISIONS (CONTINUED)

7. Emergency Provisions (Continued):

b. Emergency conditions listed in General Provision G.7.a above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:030, Section 23(3)].

c. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:030, Section 23(2)].

8. Ozone depleting substances

a. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
   1) Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
   2) Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
   3) Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
   4) Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166.
   5) Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
   6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

b. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

9. Risk Management Provisions

a. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to U.S. EPA using the RMP* eSubmit software.

b. If requested, submit additional relevant information to the Division or the U.S. EPA.

SECTION H - ALTERNATE OPERATING SCENARIOS

N/A

SECTION I - COMPLIANCE SCHEDULE

N/A

Appendix D

Environmental Data Sheets (EDS)

ENVIRONMENTAL DATA SHEET

(Certified Product Data Sheet)

Date of Preparation
Sep 19, 2023

10 00 [2802]

PRODUCT NUMBER

E61AC157

PRODUCT NAME

POLANE® HP Primer, Gray

MANUFACTURER'S NAME

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

This document includes all data required by 40 CFR 63.801(a) for a Certified Product Data Sheet under criteria specified in 40 CFR 63.805(a). All data given below are MAXIMUM THEORETICAL VALUES based on the product AS CURRENTLY FORMULATED. Variations may occur on individual batches due to adjustments made during production.

Hazard Category (for SARA 311.312)

E61AC157 = | Acute | Chronic | Fire |

Product Weight	Specific Gravity	FLASH POINT
11.11 lb/gal	1.34	60 °F PMCC

AS MIXED (as per product data sheet): POLANE® HP Primer, Gray E61AC0157 11:1 V66VC236

AS MIXED

Product Weight	Specific Gravity	FLASH POINT
10.92 lb/gal	1.31	53 °F TCC

Volatile Ingredients

Chemical / Compound	SARA 302 EHS	CERCLA	SARA 313 TC	HAPS 112	% by Weight	% by Volume
5-Ethyl-2-nonanone 5440-89-1	N	N	N	N	4	5
Diamyl Ketone 927-49-1	N	N	N	N	3	5
Methyl n-Amyl Ketone 110-43-0	N	N	N	N	8	14
n-Butyl Acetate 123-86-4	N	Y	N	N	11	17
t-Butyl Acetate 540-88-5	N	Y	N	N	11	17

Volatile Ingredients AS MIXED

Chemical / Compound	SARA 302 EHS	CERCLA	SARA 313 TC	HAPS 112	% by Weight	% by Volume
5-Ethyl-2-nonanone 5440-89-1	N	N	N	N	3	5
Diamyl Ketone 927-49-1	N	N	N	N	3	4
Methyl n-Amyl Ketone 110-43-0	N	N	N	N	8	13
n-Butyl Acetate 123-86-4	N	Y	N	N	11	17
t-Butyl Acetate 540-88-5	N	Y	N	N	10	16

Volatile Organic Compounds - U.S. EPA / Canada

	E61AC157		AS MIXED POLANE® HP Primer, Gray E61AC0157 11:1 V66VC236	
	LB/Gal	g/L	LB/Gal	g/L
Coating Density	11.11	1331	10.92	1308
	By wt	By vol	By wt	By vol
Total Volatiles	37.8%	59.1%	37.2%	57.1%
Federally exempt solvents				
Water	0.0%	0.0%	0.0%	0.0%
T-Butyl Acetate	11.1%	17.1%	10.3%	15.7%
Organic Volatiles	26.7%	41.9%	26.8%	41.4%
Percent Non-Volatile	62.2%	40.9%	62.8%	42.9%
VOC Content	LB/Gal	g/L	LB/Gal	g/L
Total	2.96	355	2.93	351
Less exempt solvents	3.57	428	3.47	416
Of solids	7.24	867	6.82	818
Of solids	0.42 lb/lb	0.42 kg/kg	0.42 lb/lb	0.42 kg/kg
	By wt		By wt	
By wt LVP-VOC	20.3%		20.7%	

Maximum Incremental Reactivity (MIR) (per US EPA Aerosol Ctg Rule, MIR Values 2009) **1.77**
AS MIXED Maximum Incremental Reactivity (MIR) (per US EPA Aerosol Ctg Rule, MIR Values 2009) **1.74**

Volatile Organic Compounds - California

	E61AC157		AS MIXED POLANE® HP Primer, Gray E61AC0157 11:1 V66VC236	
	LB/Gal	g/L	LB/Gal	g/L
Coating Density	11.11	1331	10.92	1308
	By wt	By vol	By wt	By vol
Total Volatiles	37.8%	59.1%	37.2%	57.1%
Exempt solvents				
Water	0.0%	0.0%	0.0%	0.0%
Organic Volatiles	37.8%	59.0%	37.2%	57.1%
Percent Non-Volatile	62.2%	40.9%	62.8%	42.9%
VOC Content	LB/Gal	g/L	LB/Gal	g/L
Total	4.19	502	4.05	486
Less exempt solvents	4.19	502	4.06	486
Of solids	10.24	1227	9.45	1133
Of solids	0.60 lb/lb	0.60 kg/kg	0.59 lb/lb	0.59 kg/kg
	By wt		By wt	
By wt LVP-VOC	31.4%		31.0%	

Maximum Incremental Reactivity (MIR) (per California Air Resources Board Aerosol Products Regulation, MIR Values 2010) **1.04**
AS MIXED Maximum Incremental Reactivity (MIR) (per California Air Resources Board Aerosol Products Regulation, MIR Values 2010) **1.01**

Volatile Organic Compounds - South Coast Air Quality Management District, California, US

	E61AC157		AS MIXED POLANE® HP Primer, Gray E61AC0157 11:1 V66VC236	
	LB/Gal	g/L	LB/Gal	g/L
Coating Density	11.11	1331	10.92	1308
	By wt	By vol	By wt	By vol
Total Volatiles	37.8%	59.1%	37.2%	57.1%
Exempt solvents				
Water	0.0%	0.0%	0.0%	0.0%
Organic Volatiles	37.8%	59.0%	37.2%	57.1%
Percent Non-Volatile	62.2%	40.9%	62.8%	42.9%
VOC Content	LB/Gal	g/L	LB/Gal	g/L
Total	4.19	502	4.05	486
Less exempt solvents	4.19	502	4.06	486
Of solids	10.24	1227	9.45	1133
Of solids	0.60 lb/lb	0.60 kg/kg	0.59 lb/lb	0.59 kg/kg

Volatile Organic Compounds - EU Directive 2004/42/EC

	E61AC157		AS MIXED POLANE® HP Primer, Gray E61AC0157 11:1 V66VC236	
	By wt	By vol	By wt	By vol
Total Volatiles	37.8%	59.1%	37.2%	57.1%
VOC Content	LB/Gal	g/L	LB/Gal	g/L
Total	4.19	502	4.05	486

Volatile Organic Compounds - EU Directive 2010/75/EU

	E61AC157		AS MIXED POLANE® HP Primer, Gray E61AC0157 11:1 V66VC236	
	By wt	By vol	By wt	By vol
Total Volatiles	37.8%	59.1%	37.2%	57.1%
VOC Content	LB/Gal	g/L	LB/Gal	g/L
Total	4.19	502	4.05	486

Volatile Organic Compounds - Mexico

	E61AC157		AS MIXED POLANE® HP Primer, Gray E61AC0157 11:1 V66VC236	
	LB/Gal	g/L	LB/Gal	g/L
Coating Density	11.11	1331	10.92	1308
	By wt	By vol	By wt	By vol
Total Volatiles	37.8%	59.1%	37.2%	57.1%
Exempt solvents				
Water	0.0%	0.0%	0.0%	0.0%
Organic Volatiles	37.8%	59.0%	37.2%	57.1%
Percent Non-Volatile	62.2%	40.9%	62.8%	42.9%
VOC Content	LB/Gal	g/L	LB/Gal	g/L
Total	4.19	502	4.05	486
Less exempt solvents	4.19	502	4.06	486
Of solids	10.24	1227	9.45	1133
Of solids	0.60 lb/lb	0.60 kg/kg	0.59 lb/lb	0.59 kg/kg

Hazardous Air Pollutants (Clean Air Act, Section 112(b))

	E61AC157		AS MIXED POLANE® HP Primer, Gray E61AC0157 11:1 V66VC236	
	LB/Gal	kg/L	LB/Gal	kg/L
Volatile HAPS	0.00	0.000	0.00	0.000
Of solids	0.00	0.000	0.00	0.000
Of solids	0.00 lb/lb	0.00 kg/kg	0.00 lb/lb	0.00 kg/kg

Air Quality Data

Density of Organic Solvent Blend

7.11 lb/gal

Photochemically Reactive

No

Density of Organic Solvent Blend AS MIXED

7.12 lb/gal

Photochemically Reactive AS MIXED

No

Additional Regulatory Information

US EPA TSCA:

Not Applicable

Relevant identified uses of the substance or mixture and uses advised against:

Not Applicable

US EPA TSCA: AS MIXED

Not Applicable

Relevant identified uses of the substance or mixture and uses advised against: AS MIXED

Not Applicable

Waste Disposal

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.

Addition of reducers or other additives to this product may substantially alter the above data. 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.

ENVIRONMENTAL DATA SHEET

(Certified Product Data Sheet)

Date of Preparation
Sep 19, 2023

08 00 [3422]

PRODUCT NUMBER

F63BC117S

PRODUCT NAME

POLANE® SP Polyurethane Enamel (Part A), HCE-51 Black

MANUFACTURER'S NAME

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

This document includes all data required by 40 CFR 63.801(a) for a Certified Product Data Sheet under criteria specified in 40 CFR 63.805(a). All data given below are MAXIMUM THEORETICAL VALUES based on the product AS CURRENTLY FORMULATED. Variations may occur on individual batches due to adjustments made during production.

Hazard Category (for SARA 311.312)

F63BC117S = | Acute | Chronic | Fire |

Product Weight	Specific Gravity	FLASH POINT
8.50 lb/gal	1.02	40 °F PMCC

AS MIXED (as per product data sheet): POLANE® SP Polyurethane Enamel, F63BC117S mixed 5:1 V66VC236

AS MIXED

Product Weight	Specific Gravity	FLASH POINT
8.55 lb/gal	1.03	47 °F TCC

Volatile Ingredients

Chemical / Compound	SARA 302 EHS	CERCLA	SARA 313 TC	HAPS 112	% by Weight	% by Volume
Methyl n-Amyl Ketone 110-43-0	N	N	N	N	20	25
2-Ethylhexyl Acetate 103-09-3	N	N	N	N	2	2
n-Butyl Acetate 123-86-4	N	Y	N	N	2	3
t-Butyl Acetate 540-88-5	N	Y	N	N	25	30
Dimethyl Glutarate 1119-40-0	N	N	N	N	1	1

Volatile Ingredients AS MIXED

Chemical / Compound	SARA 302 EHS	CERCLA	SARA 313 TC	HAPS 112	% by Weight	% by Volume
Methyl n-Amyl Ketone 110-43-0	N	N	N	N	17	21
2-Ethylhexyl Acetate 103-09-3	N	N	N	N	1	2
n-Butyl Acetate 123-86-4	N	Y	N	N	4	4
t-Butyl Acetate 540-88-5	N	Y	N	N	21	25
Dimethyl Glutarate 1119-40-0	N	N	N	N	1	< 1

Volatile Organic Compounds - U.S. EPA / Canada

	F63BC117S		AS MIXED POLANE® SP Polyurethane Enamel, F63BC117S mixed 5:1 V66VC236	
	LB/Gal	g/L	LB/Gal	g/L
Coating Density	8.50	1018	8.55	1024
	By wt	By vol	By wt	By vol
Total Volatiles	51.6%	61.9%	47.7%	57.4%
Federally exempt solvents				
Water	0.0%	0.0%	0.0%	0.0%
T-Butyl Acetate	25.0%	29.5%	20.7%	24.6%
Organic Volatiles	26.5%	32.3%	27.0%	32.8%
Percent Non-Volatile	48.4%	38.1%	52.3%	42.6%
VOC Content	LB/Gal	g/L	LB/Gal	g/L
Total	2.25	270	2.30	276
Less exempt solvents	3.20	383	3.06	366
Of solids	5.91	708	5.41	649
Of solids	0.54 lb/lb	0.54 kg/kg	0.51 lb/lb	0.51 kg/kg
	By wt		By wt	
By wt LVP-VOC	24.9%		25.1%	

Maximum Incremental Reactivity (MIR) (per US EPA Aerosol Ctg Rule, MIR Values 2009) **0.71**
AS MIXED Maximum Incremental Reactivity (MIR) (per US EPA Aerosol Ctg Rule, MIR Values 2009) **0.85**

Volatile Organic Compounds - California

	F63BC117S		AS MIXED POLANE® SP Polyurethane Enamel, F63BC117S mixed 5:1 V66VC236	
	LB/Gal	g/L	LB/Gal	g/L
Coating Density	8.50	1018	8.55	1024
	By wt	By vol	By wt	By vol
Total Volatiles	51.6%	61.9%	47.7%	57.4%
Exempt solvents				
Water	0.0%	0.0%	0.0%	0.0%
Organic Volatiles	51.6%	61.9%	47.7%	57.4%
Percent Non-Volatile	48.4%	38.1%	52.3%	42.6%
VOC Content	LB/Gal	g/L	LB/Gal	g/L
Total	4.38	525	4.08	489
Less exempt solvents	4.38	525	4.08	489
Of solids	11.49	1377	9.58	1148
Of solids	1.06 lb/lb	1.06 kg/kg	0.91 lb/lb	0.91 kg/kg
	By wt		By wt	
By wt LVP-VOC	49.9%		45.8%	

Maximum Incremental Reactivity (MIR) (per California Air Resources Board Aerosol Products Regulation, MIR Values 2010) **0.59**
AS MIXED Maximum Incremental Reactivity (MIR) (per California Air Resources Board Aerosol Products Regulation, MIR Values 2010) **0.65**

Volatile Organic Compounds - South Coast Air Quality Management District, California, US

	F63BC117S		AS MIXED POLANE® SP Polyurethane Enamel, F63BC117S mixed 5:1 V66VC236	
	LB/Gal	g/L	LB/Gal	g/L
Coating Density	8.50	1018	8.55	1024
	By wt	By vol	By wt	By vol
Total Volatiles	51.6%	61.9%	47.7%	57.4%
Exempt solvents				
Water	0.0%	0.0%	0.0%	0.0%
Organic Volatiles	51.6%	61.9%	47.7%	57.4%
Percent Non-Volatile	48.4%	38.1%	52.3%	42.6%
VOC Content	LB/Gal	g/L	LB/Gal	g/L
Total	4.38	525	4.08	489
Less exempt solvents	4.38	525	4.08	489
Of solids	11.49	1377	9.58	1148
Of solids	1.06 lb/lb	1.06 kg/kg	0.91 lb/lb	0.91 kg/kg

Volatile Organic Compounds - EU Directive 2004/42/EC

	F63BC117S		AS MIXED POLANE® SP Polyurethane Enamel, F63BC117S mixed 5:1 V66VC236	
	By wt	By vol	By wt	By vol
Total Volatiles	52.0%	62.3%	48.0%	57.8%
VOC Content	LB/Gal	g/L	LB/Gal	g/L
Total	4.41	529	4.10	492

Volatile Organic Compounds - EU Directive 2010/75/EU

	F63BC117S		AS MIXED POLANE® SP Polyurethane Enamel, F63BC117S mixed 5:1 V66VC236	
	By wt	By vol	By wt	By vol
Total Volatiles	50.1%	60.4%	46.5%	56.2%
VOC Content	LB/Gal	g/L	LB/Gal	g/L
Total	4.25	510	3.97	476

Volatile Organic Compounds - Mexico

	F63BC117S		AS MIXED POLANE® SP Polyurethane Enamel, F63BC117S mixed 5:1 V66VC236	
	LB/Gal	g/L	LB/Gal	g/L
Coating Density	8.50	1018	8.55	1024
	By wt	By vol	By wt	By vol
Total Volatiles	51.6%	61.9%	47.7%	57.4%
Exempt solvents				
Water	0.0%	0.0%	0.0%	0.0%
Organic Volatiles	51.6%	61.9%	47.7%	57.4%
Percent Non-Volatile	48.4%	38.1%	52.3%	42.6%
VOC Content	LB/Gal	g/L	LB/Gal	g/L
Total	4.38	525	4.08	489
Less exempt solvents	4.38	525	4.08	489
Of solids	11.49	1377	9.58	1148
Of solids	1.06 lb/lb	1.06 kg/kg	0.91 lb/lb	0.91 kg/kg

Hazardous Air Pollutants (Clean Air Act, Section 112(b))

	F63BC117S		AS MIXED POLANE® SP Polyurethane Enamel, F63BC117S mixed 5:1 V66VC236	
	LB/Gal	kg/L	LB/Gal	kg/L
Volatile HAPS	0.00	0.000	0.00	0.000
Of solids	0.00	0.000	0.00	0.000
Of solids	0.00 lb/lb	0.00 kg/kg	0.00 lb/lb	0.00 kg/kg

Air Quality Data

Density of Organic Solvent Blend

7.09 lb/gal

Photochemically Reactive

No

Density of Organic Solvent Blend AS MIXED

7.11 lb/gal

Photochemically Reactive AS MIXED

No

Additional Regulatory Information

US EPA TSCA:

Not Applicable

Relevant identified uses of the substance or mixture and uses advised against:

Not Applicable

US EPA TSCA: AS MIXED

Not Applicable

Relevant identified uses of the substance or mixture and uses advised against: AS MIXED

Not Applicable

Waste Disposal

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.

Addition of reducers or other additives to this product may substantially alter the above data. 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.

ENVIRONMENTAL DATA SHEET

(Certified Product Data Sheet)

Date of Preparation
Sep 19, 2023

08 00 [3422]

PRODUCT NUMBER

F63GL12

PRODUCT NAME

POLANE® SP Polyurethane Enamel (Part A), HCE-164 Military Green

MANUFACTURER'S NAME

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

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Hazard Category (for SARA 311.312)

F63GL12 = | Acute | Chronic | Fire |

Product Weight	Specific Gravity	FLASH POINT
8.70 lb/gal	1.05	40 °F PMCC

AS MIXED (as per product data sheet): POLANE® SP Polyurethane Enamel, HCE-164 Military Green F63GL12 5:1 V66VC236

AS MIXED

Product Weight	Specific Gravity	FLASH POINT
8.72 lb/gal	1.05	47 °F TCC

Volatile Ingredients

Chemical / Compound	SARA 302 EHS	CERCLA	SARA 313 TC	HAPS 112	% by Weight	% by Volume
Methyl n-Amyl Ketone 110-43-0	N	N	N	N	18	23
2-Ethylhexyl Acetate 103-09-3	N	N	N	N	2	2
n-Butyl Acetate 123-86-4	N	Y	N	N	2	3
1-Methoxy-2-Propanol Acetate 108-65-6	N	N	N	N	1	1
t-Butyl Acetate 540-88-5	N	Y	N	N	24	28
Dimethyl Glutarate 1119-40-0	N	N	N	N	1	1

Volatile Ingredients AS MIXED

Chemical / Compound	SARA 302 EHS	CERCLA	SARA 313 TC	HAPS 112	% by Weight	% by Volume
Methyl n-Amyl Ketone 110-43-0	N	N	N	N	15	20
2-Ethylhexyl Acetate 103-09-3	N	N	N	N	1	2
n-Butyl Acetate 123-86-4	N	Y	N	N	3	4
1-Methoxy-2-Propanol Acetate 108-65-6	N	N	N	N	1	1
t-Butyl Acetate 540-88-5	N	Y	N	N	20	24

Volatile Organic Compounds - U.S. EPA / Canada

	F63GL12		AS MIXED POLANE® SP Polyurethane Enamel, HCE-164 Military Green F63GL12 5:1 V66VC236	
	LB/Gal	g/L	LB/Gal	g/L
Coating Density	8.70	1042	8.72	1044
	By wt	By vol	By wt	By vol
Total Volatiles	49.5%	60.6%	46.1%	56.3%
Federally exempt solvents				
Water	0.0%	0.0%	0.0%	0.0%
T-Butyl Acetate	23.5%	28.4%	19.5%	23.7%
Organic Volatiles	26.0%	32.2%	26.5%	32.7%
Percent Non-Volatile	50.5%	39.4%	53.9%	43.7%
VOC Content	LB/Gal	g/L	LB/Gal	g/L
Total	2.25	270	2.31	276
Less exempt solvents	3.15	378	3.02	362
Of solids	5.73	686	5.29	634
Of solids	0.51 lb/lb	0.51 kg/kg	0.49 lb/lb	0.49 kg/kg
	By wt		By wt	
By wt LVP-VOC	24.5%		24.7%	

Maximum Incremental Reactivity (MIR) (per US EPA Aerosol Ctg Rule, MIR Values 2009) **0.68**
AS MIXED Maximum Incremental Reactivity (MIR) (per US EPA Aerosol Ctg Rule, MIR Values 2009) **0.83**

Volatile Organic Compounds - California

	F63GL12		AS MIXED POLANE® SP Polyurethane Enamel, HCE-164 Military Green F63GL12 5:1 V66VC236	
	LB/Gal	g/L	LB/Gal	g/L
Coating Density	8.70	1042	8.72	1044
	By wt	By vol	By wt	By vol
Total Volatiles	49.5%	60.6%	46.1%	56.3%
Exempt solvents				
Water	0.0%	0.0%	0.0%	0.0%
Organic Volatiles	49.5%	60.6%	46.1%	56.3%
Percent Non-Volatile	50.5%	39.4%	53.9%	43.7%
VOC Content	LB/Gal	g/L	LB/Gal	g/L
Total	4.30	515	4.01	481
Less exempt solvents	4.30	515	4.01	481
Of solids	10.91	1307	9.19	1101
Of solids	0.97 lb/lb	0.97 kg/kg	0.85 lb/lb	0.85 kg/kg
	By wt		By wt	
By wt LVP-VOC	48.0%		44.3%	

Maximum Incremental Reactivity (MIR) (per California Air Resources Board Aerosol Products Regulation, MIR Values 2010) **0.58**
AS MIXED Maximum Incremental Reactivity (MIR) (per California Air Resources Board Aerosol Products Regulation, MIR Values 2010) **0.64**

Volatile Organic Compounds - South Coast Air Quality Management District, California, US

	F63GL12		AS MIXED POLANE® SP Polyurethane Enamel, HCE-164 Military Green F63GL12 5:1 V66VC236	
	LB/Gal	g/L	LB/Gal	g/L
Coating Density	8.70	1042	8.72	1044
	By wt	By vol	By wt	By vol
Total Volatiles	49.5%	60.6%	46.1%	56.3%
Exempt solvents				
Water	0.0%	0.0%	0.0%	0.0%
Organic Volatiles	49.5%	60.6%	46.1%	56.3%
Percent Non-Volatile	50.5%	39.4%	53.9%	43.7%
VOC Content	LB/Gal	g/L	LB/Gal	g/L
Total	4.30	515	4.01	481
Less exempt solvents	4.30	515	4.01	481
Of solids	10.91	1307	9.19	1101
Of solids	0.97 lb/lb	0.97 kg/kg	0.85 lb/lb	0.85 kg/kg

Volatile Organic Compounds - EU Directive 2004/42/EC

	F63GL12		AS MIXED POLANE® SP Polyurethane Enamel, HCE-164 Military Green F63GL12 5:1 V66VC236	
	By wt	By vol	By wt	By vol
Total Volatiles	49.9%	61.0%	46.4%	56.7%
VOC Content	LB/Gal	g/L	LB/Gal	g/L
Total	4.33	519	4.04	484

Volatile Organic Compounds - EU Directive 2010/75/EU

	F63GL12		AS MIXED POLANE® SP Polyurethane Enamel, HCE-164 Military Green F63GL12 5:1 V66VC236	
	By wt	By vol	By wt	By vol
Total Volatiles	48.2%	59.3%	44.9%	55.3%
VOC Content	LB/Gal	g/L	LB/Gal	g/L
Total	4.18	501	3.91	469

Volatile Organic Compounds - Mexico

	F63GL12		AS MIXED POLANE® SP Polyurethane Enamel, HCE-164 Military Green F63GL12 5:1 V66VC236	
	LB/Gal	g/L	LB/Gal	g/L
Coating Density	8.70	1042	8.72	1044
	By wt	By vol	By wt	By vol
Total Volatiles	49.5%	60.6%	46.1%	56.3%
Exempt solvents				
Water	0.0%	0.0%	0.0%	0.0%
Organic Volatiles	49.5%	60.6%	46.1%	56.3%
Percent Non-Volatile	50.5%	39.4%	53.9%	43.7%
VOC Content	LB/Gal	g/L	LB/Gal	g/L
Total	4.30	515	4.01	481
Less exempt solvents	4.30	515	4.01	481
Of solids	10.91	1307	9.19	1101
Of solids	0.97 lb/lb	0.97 kg/kg	0.85 lb/lb	0.85 kg/kg

Hazardous Air Pollutants (Clean Air Act, Section 112(b))

	F63GL12		AS MIXED POLANE® SP Polyurethane Enamel, HCE-164 Military Green F63GL12 5:1 V66VC236	
	LB/Gal	kg/L	LB/Gal	kg/L
Volatile HAPS	0.00	0.000	0.00	0.000
Of solids	0.00	0.000	0.00	0.000
Of solids	0.00 lb/lb	0.00 kg/kg	0.00 lb/lb	0.00 kg/kg

Air Quality Data

Density of Organic Solvent Blend

7.11 lb/gal

Photochemically Reactive

No

Density of Organic Solvent Blend AS MIXED

7.13 lb/gal

Photochemically Reactive AS MIXED

No

Additional Regulatory Information

US EPA TSCA:

Not Applicable

Relevant identified uses of the substance or mixture and uses advised against:

Not Applicable

US EPA TSCA: AS MIXED

Not Applicable

Relevant identified uses of the substance or mixture and uses advised against: AS MIXED

Not Applicable

Waste Disposal

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.

Addition of reducers or other additives to this product may substantially alter the above data. 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.

ENVIRONMENTAL DATA SHEET

(Certified Product Data Sheet)

Date of Preparation
Sep 19, 2023

13 00 [3422]

PRODUCT NUMBER

F63HL14

PRODUCT NAME

POLANE® SP Polyurethane Enamel, HCE-113 Parchment

MANUFACTURER'S NAME

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

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Hazard Category (for SARA 311.312)

F63HL14 = | Acute | Chronic | Fire |

Product Weight	Specific Gravity	FLASH POINT
9.34 lb/gal	1.12	40 °F PMCC

AS MIXED (as per product data sheet): POLANE® Solar Reflective Polyurethane, HCE-113 Parchment F63HL0014 5:1 V66VC236

AS MIXED

Product Weight	Specific Gravity	FLASH POINT
9.25 lb/gal	1.11	48 °F TCC

Volatile Ingredients

Chemical / Compound	SARA 302 EHS	CERCLA	SARA 313 TC	HAPS 112	% by Weight	% by Volume
Methyl n-Amyl Ketone 110-43-0	N	N	N	N	18	25
2-Ethylhexyl Acetate 103-09-3	N	N	N	N	2	2
n-Butyl Acetate 123-86-4	N	Y	N	N	3	3
t-Butyl Acetate 540-88-5	N	Y	N	N	18	24
Dimethyl Glutarate 1119-40-0	N	N	N	N	1	1

Volatile Ingredients AS MIXED

Chemical / Compound	SARA 302 EHS	CERCLA	SARA 313 TC	HAPS 112	% by Weight	% by Volume
Methyl n-Amyl Ketone 110-43-0	N	N	N	N	16	21
2-Ethylhexyl Acetate 103-09-3	N	N	N	N	1	2
n-Butyl Acetate 123-86-4	N	Y	N	N	4	4
t-Butyl Acetate 540-88-5	N	Y	N	N	15	20

Volatile Organic Compounds - U.S. EPA / Canada

	F63HL14		AS MIXED POLANE® Solar Reflective Polyurethane, HCE-113 Parchment F63HL0014 5:1 V66VC236	
	LB/Gal	g/L	LB/Gal	g/L
Coating Density	9.34	1119	9.25	1108
	By wt	By vol	By wt	By vol
Total Volatiles	43.6%	57.5%	41.3%	53.7%
Federally exempt solvents				
Water	0.0%	0.0%	0.0%	0.0%
T-Butyl Acetate	18.2%	23.6%	15.3%	19.6%
Organic Volatiles	25.4%	33.9%	26.0%	34.1%
Percent Non-Volatile	56.4%	42.5%	58.7%	46.3%
VOC Content	LB/Gal	g/L	LB/Gal	g/L
Total	2.37	284	2.40	288
Less exempt solvents	3.10	371	2.99	358
Of solids	5.57	667	5.19	622
Of solids	0.44 lb/lb	0.44 kg/kg	0.44 lb/lb	0.44 kg/kg
	By wt		By wt	
By wt LVP-VOC	23.8%		24.1%	

Maximum Incremental Reactivity (MIR) (per US EPA Aerosol Ctg Rule, MIR Values 2009) **0.66**
AS MIXED Maximum Incremental Reactivity (MIR) (per US EPA Aerosol Ctg Rule, MIR Values 2009) **0.80**

Volatile Organic Compounds - California

	F63HL14		AS MIXED POLANE® Solar Reflective Polyurethane, HCE-113 Parchment F63HL0014 5:1 V66VC236	
	LB/Gal	g/L	LB/Gal	g/L
Coating Density	9.34	1119	9.25	1108
	By wt	By vol	By wt	By vol
Total Volatiles	43.6%	57.5%	41.3%	53.7%
Exempt solvents				
Water	0.0%	0.0%	0.0%	0.0%
Organic Volatiles	43.6%	57.5%	41.3%	53.7%
Percent Non-Volatile	56.4%	42.5%	58.7%	46.3%
VOC Content	LB/Gal	g/L	LB/Gal	g/L
Total	4.06	487	3.81	457
Less exempt solvents	4.06	487	3.81	457
Of solids	9.56	1145	8.25	988
Of solids	0.77 lb/lb	0.77 kg/kg	0.70 lb/lb	0.70 kg/kg
	By wt		By wt	
By wt LVP-VOC	42.0%		39.4%	

Maximum Incremental Reactivity (MIR) (per California Air Resources Board Aerosol Products Regulation, MIR Values 2010) **0.55**
AS MIXED Maximum Incremental Reactivity (MIR) (per California Air Resources Board Aerosol Products Regulation, MIR Values 2010) **0.61**

Volatile Organic Compounds - South Coast Air Quality Management District, California, US

	F63HL14		AS MIXED POLANE® Solar Reflective Polyurethane, HCE-113 Parchment F63HL0014 5:1 V66VC236	
	LB/Gal	g/L	LB/Gal	g/L
Coating Density	9.34	1119	9.25	1108
	By wt	By vol	By wt	By vol
Total Volatiles	43.6%	57.5%	41.3%	53.7%
Exempt solvents				
Water	0.0%	0.0%	0.0%	0.0%
Organic Volatiles	43.6%	57.5%	41.3%	53.7%
Percent Non-Volatile	56.4%	42.5%	58.7%	46.3%
VOC Content	LB/Gal	g/L	LB/Gal	g/L
Total	4.06	487	3.81	457
Less exempt solvents	4.06	487	3.81	457
Of solids	9.56	1145	8.25	988
Of solids	0.77 lb/lb	0.77 kg/kg	0.70 lb/lb	0.70 kg/kg

Volatile Organic Compounds - EU Directive 2004/42/EC

	F63HL14		AS MIXED POLANE® Solar Reflective Polyurethane, HCE-113 Parchment F63HL0014 5:1 V66VC236	
	By wt	By vol	By wt	By vol
Total Volatiles	44.0%	57.9%	41.6%	54.1%
VOC Content	LB/Gal	g/L	LB/Gal	g/L
Total	4.10	492	3.84	461

Volatile Organic Compounds - EU Directive 2010/75/EU

	F63HL14		AS MIXED POLANE® Solar Reflective Polyurethane, HCE-113 Parchment F63HL0014 5:1 V66VC236	
	By wt	By vol	By wt	By vol
Total Volatiles	42.1%	55.9%	40.0%	52.5%
VOC Content	LB/Gal	g/L	LB/Gal	g/L
Total	3.93	471	3.70	443

Volatile Organic Compounds - Mexico

	F63HL14		AS MIXED POLANE® Solar Reflective Polyurethane, HCE-113 Parchment F63HL0014 5:1 V66VC236	
	LB/Gal	g/L	LB/Gal	g/L
Coating Density	9.34	1119	9.25	1108
	By wt	By vol	By wt	By vol
Total Volatiles	43.6%	57.5%	41.3%	53.7%
Exempt solvents				
Water	0.0%	0.0%	0.0%	0.0%
Organic Volatiles	43.6%	57.5%	41.3%	53.7%
Percent Non-Volatile	56.4%	42.5%	58.7%	46.3%
VOC Content	LB/Gal	g/L	LB/Gal	g/L
Total	4.06	487	3.81	457
Less exempt solvents	4.06	487	3.81	457
Of solids	9.56	1145	8.25	988
Of solids	0.77 lb/lb	0.77 kg/kg	0.70 lb/lb	0.70 kg/kg

Hazardous Air Pollutants (Clean Air Act, Section 112(b))

	F63HL14		AS MIXED POLANE® Solar Reflective Polyurethane, HCE-113 Parchment F63HL0014 5:1 V66VC236	
	LB/Gal	kg/L	LB/Gal	kg/L
Volatile HAPS	0.00	0.000	0.00	0.000
Of solids	0.00	0.000	0.00	0.000
Of solids	0.00 lb/lb	0.00 kg/kg	0.00 lb/lb	0.00 kg/kg

Air Quality Data

Density of Organic Solvent Blend

7.08 lb/gal

Photochemically Reactive

No

Density of Organic Solvent Blend AS MIXED

7.10 lb/gal

Photochemically Reactive AS MIXED

No

Additional Regulatory Information

US EPA TSCA:

Not Applicable

Relevant identified uses of the substance or mixture and uses advised against:

Not Applicable

US EPA TSCA: AS MIXED

Not Applicable

Relevant identified uses of the substance or mixture and uses advised against: AS MIXED

Not Applicable

Waste Disposal

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.

Addition of reducers or other additives to this product may substantially alter the above data. 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.

ENVIRONMENTAL DATA SHEET

(Certified Product Data Sheet)

Date of Preparation
Sep 19, 2023

01IXF00 [2623]

PRODUCT NUMBER

MKH-F63SPL30122-4311

PRODUCT NAME

POLANE® SP Polyurethane Enamel, PPG 19126 Blue F63SPL30122-4311 5:1 V66VC236, PPG 19126 Blue

MANUFACTURER'S NAME

TEST DOCUMENT

FOR GHS COMPARISION ONLY

This document includes all data required by 40 CFR 63.801(a) for a Certified Product Data Sheet under criteria specified in 40 CFR 63.805(a). All data given below are MAXIMUM THEORETICAL VALUES based on the product AS CURRENTLY FORMULATED. Variations may occur on individual batches due to adjustments made during production.

Hazard Category (for SARA 311.312)

MKH-F63SPL30122-4311 = | Acute | Chronic | Fire |

Product Weight	Specific Gravity	FLASH POINT
8.35 lb/gal	1.00	95 °F TCC

Volatile Ingredients

Chemical / Compound	SARA 302 EHS	CERCLA	SARA 313 TC	HAPS 112	% by Weight	% by Volume
Ethylbenzene **100-41-4**	N	Y	Y	Y	0.1	< 1
Methyl n-Amyl Ketone **110-43-0**	N	N	N	N	29	36
n-Butyl Acetate **123-86-4**	N	Y	N	N	6	7
1-Methoxy-2-Propanol Acetate **108-65-6**	N	N	N	N	5	5

Volatile Organic Compounds - U.S. EPA / Canada

	MKH-F63SPL30122-4311	
	LB/Gal	**g/L**
Coating Density	8.35	1000
	By wt	**By vol**
Total Volatiles	45.7%	54.1%
Federally exempt solvents		
Water	0.0%	0.0%
Organic Volatiles	45.7%	54.1%
Percent Non-Volatile	54.3%	45.9%
VOC Content	**LB/Gal**	**g/L**
Total	3.81	457
Less exempt solvents	3.81	457
Of solids	8.31	996
Of solids	0.84 lb/lb	0.84 kg/kg
	By wt	
By wt LVP-VOC	44.0%	

Maximum Incremental Reactivity (MIR) (per US EPA Aerosol Ctg Rule, MIR Values 2009) **1.32**

Volatile Organic Compounds - California

	MKH-F63SPL30122-4311	
	LB/Gal	g/L
Coating Density	8.35	1000
	By wt	By vol
Total Volatiles	45.7%	54.1%
Exempt solvents		
Water	0.0%	0.0%
Organic Volatiles	45.7%	54.1%
Percent Non-Volatile	54.3%	45.9%
VOC Content	LB/Gal	g/L
Total	3.81	457
Less exempt solvents	3.81	457
Of solids	8.31	996
Of solids	0.84 lb/lb	0.84 kg/kg
	By wt	
By wt LVP-VOC	44.0%	

Maximum Incremental Reactivity (MIR) (per California Air Resources Board Aerosol Products Regulation, MIR Values 2010) **1.04**

Volatile Organic Compounds - South Coast Air Quality Management District, California, US

	MKH-F63SPL30122-4311	
	LB/Gal	g/L
Coating Density	8.35	1000
	By wt	By vol
Total Volatiles	45.7%	54.1%
Exempt solvents		
Water	0.0%	0.0%
Organic Volatiles	45.7%	54.1%
Percent Non-Volatile	54.3%	45.9%
VOC Content	LB/Gal	g/L
Total	3.81	457
Less exempt solvents	3.81	457
Of solids	8.31	996
Of solids	0.84 lb/lb	0.84 kg/kg

Volatile Organic Compounds - EU Directive 2004/42/EC

	MKH-F63SPL30122-4311	
	By wt	By vol
Total Volatiles	45.8%	54.1%
VOC Content	LB/Gal	g/L
Total	3.82	457

Volatile Organic Compounds - EU Directive 2010/75/EU

	MKH-F63SPL30122-4311	
	By wt	By vol
Total Volatiles	44.7%	53.1%
VOC Content	LB/Gal	g/L
Total	3.73	447

Volatile Organic Compounds - Mexico

	MKH-F63SPL30122-4311	
	LB/Gal	g/L
Coating Density	8.35	1000
	By wt	By vol
Total Volatiles	45.7%	54.1%
Exempt solvents		
Water	0.0%	0.0%
Organic Volatiles	45.7%	54.1%
Percent Non-Volatile	54.3%	45.9%
VOC Content	LB/Gal	g/L
Total	3.81	457
Less exempt solvents	3.81	457
Of solids	8.31	996
Of solids	0.84 lb/lb	0.84 kg/kg

Hazardous Air Pollutants (Clean Air Act, Section 112(b))

	MKH-F63SPL30122-4311	
	LB/Gal	kg/L
Volatile HAPS	0.01	0.001
Of solids	0.02	0.002
Of solids	0.00 lb/lb	0.00 kg/kg

Air Quality Data

Density of Organic Solvent Blend

7.06 lb/gal

Photochemically Reactive

No

Additional Regulatory Information

US EPA TSCA:

Not Applicable

Relevant identified uses of the substance or mixture and uses advised against:

Not Applicable

Waste Disposal

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.

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ENVIRONMENTAL DATA SHEET

(Certified Product Data Sheet)

Date of Preparation
Feb 1, 2022

01IXF00 [0322]

PRODUCT NUMBER

F63SPR36695-4311

PRODUCT NAME

Polane SP Polyurethane Enamel, URS9-60008

MANUFACTURER'S NAME

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

This document includes all data required by 40 CFR 63.801(a) for a Certified Product Data Sheet under criteria specified in 40 CFR 63.805(a). All data given below are MAXIMUM THEORETICAL VALUES based on the product AS CURRENTLY FORMULATED. Variations may occur on individual batches due to adjustments made during production.

Hazard Category (for SARA 311.312)

F63SPR36695-4311 = | Acute | Chronic | Fire |

Product Weight	Specific Gravity	FLASH POINT
8.43 lb/gal	1.01	96 °F TCC

Volatile Ingredients

Chemical / Compound	SARA 302 EHS	CERCLA	SARA 313 TC	HAPS 112	% by Weight	% by Volume
Ethylbenzene **100-41-4**	N	Y	Y	Y	0.2	< 1
Methyl n-Amyl Ketone **110-43-0**	N	N	N	N	30	37
n-Butyl Acetate **123-86-4**	N	Y	N	N	5	6
1-Methoxy-2-Propanol Acetate **108-65-6**	N	N	N	N	8	8

Volatile Organic Compounds - U.S. EPA / Canada

	F63SPR36695-4311	
	LB/Gal	**g/L**
Coating Density	8.43	1010
	By wt	**By vol**
Total Volatiles	45.8%	54.6%
Federally exempt solvents		
Water	0.0%	0.0%
Organic Volatiles	45.8%	54.6%
Percent Non-Volatile	54.2%	45.4%
VOC Content	**LB/Gal**	**g/L**
Total	3.86	463
Less exempt solvents	3.86	463
Of solids	8.51	1020
Of solids	0.84 lb/lb	0.84 kg/kg
	By wt	
By wt LVP-VOC	44.8%	

Maximum Incremental Reactivity (MIR) (per US EPA Aerosol Ctg Rule, MIR Values 2009) **1.18**

Volatile Organic Compounds - California

	F63SPR36695-4311	
	LB/Gal	g/L
Coating Density	8.43	1010
	By wt	By vol
Total Volatiles	45.8%	54.6%
Exempt solvents		
Water	0.0%	0.0%
Organic Volatiles	45.8%	54.6%
Percent Non-Volatile	54.2%	45.4%
VOC Content	LB/Gal	g/L
Total	3.86	463
Less exempt solvents	3.86	463
Of solids	8.51	1020
Of solids	0.84 lb/lb	0.84 kg/kg
	By wt	
By wt LVP-VOC	44.8%	

Maximum Incremental Reactivity (MIR) (per California Air Resources Board Aerosol Products Regulation, MIR Values 2010) **1.00**

Volatile Organic Compounds - South Coast Air Quality Management District, California, US

	F63SPR36695-4311	
	LB/Gal	g/L
Coating Density	8.43	1010
	By wt	By vol
Total Volatiles	45.8%	54.6%
Exempt solvents		
Water	0.0%	0.0%
Organic Volatiles	45.8%	54.6%
Percent Non-Volatile	54.2%	45.4%
VOC Content	LB/Gal	g/L
Total	3.86	463
Less exempt solvents	3.86	463
Of solids	8.51	1020
Of solids	0.84 lb/lb	0.84 kg/kg

Volatile Organic Compounds - EU Directive 2004/42/EC

	F63SPR36695-4311	
	By wt	By vol
Total Volatiles	45.9%	54.6%
VOC Content	LB/Gal	g/L
Total	3.86	463

Volatile Organic Compounds - EU Directive 2010/75/EU

	F63SPR36695-4311	
	By wt	By vol
Total Volatiles	44.9%	53.7%
VOC Content	LB/Gal	g/L
Total	3.78	453

Volatile Organic Compounds - Mexico

	F63SPR36695-4311	
	LB/Gal	g/L
Coating Density	8.43	1010
	By wt	By vol
Total Volatiles	45.8%	54.6%
Exempt solvents		
Water	0.0%	0.0%
Organic Volatiles	45.8%	54.6%
Percent Non-Volatile	54.2%	45.4%
VOC Content	LB/Gal	g/L
Total	3.86	463
Less exempt solvents	3.86	463
Of solids	8.51	1020
Of solids	0.84 lb/lb	0.84 kg/kg

Hazardous Air Pollutants (Clean Air Act, Section 112(b))

	F63SPR36695-4311	
	LB/Gal	kg/L
Volatile HAPS	0.02	0.002
Of solids	0.05	0.006
Of solids	0.00 lb/lb	0.00 kg/kg

Air Quality Data

Density of Organic Solvent Blend

7.08 lb/gal

Photochemically Reactive

No

Additional Regulatory Information

US EPA TSCA:

Not Applicable

Relevant identified uses of the substance or mixture and uses advised against:

Not Applicable

Waste Disposal

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.

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ENVIRONMENTAL DATA SHEET

(Certified Product Data Sheet)

Date of Preparation
Oct 20, 2021

01IXF00 [2931]

PRODUCT NUMBER

F75KXH17938-4373

PRODUCT NAME

Kem® 400 Enamel, HCE-113 BRIGHT PARCHMENT T/U

MANUFACTURER'S NAME

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

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Hazard Category (for SARA 311.312)

F75KXH17938-4373 = | Acute | Chronic | Fire |

Product Weight	Specific Gravity	FLASH POINT
9.17 lb/gal	1.10	75 °F TCC

Volatile Ingredients

Chemical / Compound	SARA 302 EHS	CERCLA	SARA 313 TC	HAPS 112	% by Weight	% by Volume
Lt. Aliphatic Hydrocarbon Solvent **64742-89-8**	N	N	N	N	5	7
Ethylbenzene **100-41-4**	N	Y	Y	Y	6	8
Xylene **1330-20-7**	N	Y	Y	Y	31	40
n-Butyl Acetate **123-86-4**	N	Y	N	N	9	11

Regulated Compounds

	SARA 302 EHS	CERCLA	SARA 313 TC	HAPS 112	% by Weight	% by Volume
Cobalt Compound	N	N	Y	Y	0.1	

Volatile Organic Compounds - U.S. EPA / Canada

	F75KXH17938-4373	
	LB/Gal	**g/L**
Coating Density	9.17	1099
	By wt	**By vol**
Total Volatiles	54.1%	70.1%
Federally exempt solvents		
Water	0.2%	0.2%
Organic Volatiles	53.9%	69.9%
Percent Non-Volatile	45.9%	29.9%
VOC Content	**LB/Gal**	**g/L**
Total	4.94	592
Less exempt solvents	4.95	593
Of solids	16.52	1980
Of solids	1.17 lb/lb	1.17 kg/kg
	By wt	
By wt LVP-VOC	53.9%	

Maximum Incremental Reactivity (MIR) (per US EPA Aerosol Ctg Rule, MIR Values 2009) **2.88**

Volatile Organic Compounds - California

	F75KXH17938-4373	
	LB/Gal	**g/L**
Coating Density	9.17	1099
	By wt	**By vol**
Total Volatiles	54.1%	70.1%
Exempt solvents		
Water	0.2%	0.2%
Organic Volatiles	53.9%	69.9%
Percent Non-Volatile	45.9%	29.9%
VOC Content	**LB/Gal**	**g/L**
Total	4.94	592
Less exempt solvents	4.95	593
Of solids	16.52	1980
Of solids	1.17 lb/lb	1.17 kg/kg
	By wt	
By wt LVP-VOC	53.9%	

Maximum Incremental Reactivity (MIR) (per California Air Resources Board Aerosol Products Regulation, MIR Values 2010) **2.85**

Volatile Organic Compounds - South Coast Air Quality Management District, California, US

	F75KXH17938-4373	
	LB/Gal	g/L
Coating Density	9.17	1099
	By wt	By vol
Total Volatiles	54.1%	70.1%
Exempt solvents		
Water	0.2%	0.2%
Organic Volatiles	53.9%	69.9%
Percent Non-Volatile	45.9%	29.9%
VOC Content	LB/Gal	g/L
Total	4.94	592
Less exempt solvents	4.95	593
Of solids	16.52	1980
Of solids	1.17 lb/lb	1.17 kg/kg

Volatile Organic Compounds - EU Directive 2004/42/EC

	F75KXH17938-4373	
	By wt	By vol
Total Volatiles	54.1%	70.1%
VOC Content	LB/Gal	g/L
Total	4.94	592

Volatile Organic Compounds - EU Directive 2010/75/EU

	F75KXH17938-4373	
	By wt	By vol
Total Volatiles	54.0%	70.0%
VOC Content	LB/Gal	g/L
Total	4.94	592

Volatile Organic Compounds - Mexico

	F75KXH17938-4373	
	LB/Gal	g/L
Coating Density	9.17	1099
	By wt	By vol
Total Volatiles	54.1%	70.1%
Exempt solvents		
Water	0.2%	0.2%
Organic Volatiles	53.9%	69.9%
Percent Non-Volatile	45.9%	29.9%
VOC Content	LB/Gal	g/L
Total	4.94	592
Less exempt solvents	4.95	593
Of solids	16.52	1980
Of solids	1.17 lb/lb	1.17 kg/kg

Hazardous Air Pollutants (Clean Air Act, Section 112(b))

	F75KXH17938-4373	
	LB/Gal	kg/L
Volatile HAPS	3.39	0.407
Of solids	11.35	1.360
Of solids	0.80 lb/lb	0.80 kg/kg

Air Quality Data

Density of Organic Solvent Blend

7.07 lb/gal

Photochemically Reactive

Yes

Additional Regulatory Information

US EPA TSCA:

Not Applicable

Relevant identified uses of the substance or mixture and uses advised against:

Not Applicable

Waste Disposal

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.

Addition of reducers or other additives to this product may substantially alter the above data. 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.

S A F E T Y D A T A S H E E T

Madison Chemical Co., Inc.
3141 Clifty Drive ● Madison, IN 47250

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

NAME: **CLEANBOND 90 NMH**

TYPE: Phosphate conversion coating product
PRODUCT # 237301
EMERGENCY RESPONSE INFORMATION:

CHEMTREC	800-424-9300	24-Hour Service
Company Offices:	812-273-6000	Weekdays
Cara Cyrus:	812-599-3611	Evenings and Weekends
Bill Torline:	812-599-4976	Evenings and Weekends

PREPARED DATE: 12-04-15 PREPARED BY: Marjorie E. Hare

SECTION 2: HAZARDS IDENTIFICATION

GHS Classification

Acute Toxicity-oral	Category 5	H303
Skin Corrosion/Irritation	Category 3	H316
Serious Eye Damage/Eye Irritation	Category 2B	H320
Acute Toxicity – Inhalation	Category 4	H332
Aquatic Toxicity (Acute)	Category 3	H402

Signal Word: WARNING

Symbol:

Hazard Statements

H303 May be harmful if swallowed
H316 Causes mild skin irritation.
H320 Causes eye irritation.
H402 Harmful to aquatic life

Precautionary Statements

P264 Wash hands, forearms, and exposed areas thoroughly after handling.
P270 Do not eat, drink, or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear eye protection, face protection, protective clothing, protective gloves.
P301 + P330 IF SWALLOWED: rinse mouth.
P332 + P313 If skin irritation occurs: Get medical advice / attention.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314 Get medical attention if you feel unwell.
P321 Specific treatment (see Section 4).
P362 Take off contaminated clothing and wash before reuse.
P501 Dispose of contents / container according to local, regional, national and international regulations.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	SYNONYM	CAS NO.	% BY WEIGHT
Phosphoric acid	Orthophosphoric acid	7664-38-2	1 - 10
Nitrates, as NO_3	None	Not applicable	1 - 10

*If Chemical Name/CAS No is "proprietary" and/or % By Weight is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

SECTION 4: FIRST AID MEASURES

DESCRIPTION OF FIRST AID MEASURES:

EYES: Immediately flush with large quantities of cool water continuously for at least 15 minutes. Call a physician.

SKIN: Immediately flush with large quantities of cool water continuously for at least 15 minutes. Call a physician. Remove contaminated clothing and shoes. Do not put contaminated clothing and shoes back on. Wash clothing and shoes thoroughly in soap and water; rinse repeatedly in clean water and dry before reuse.

INGESTION: Do not induce vomiting. Give water. Never give anything by mouth to an unconscious person. Call a physician.

INHALATION: Move subject to fresh air and get medical attention.

PRIMARY ROUTE(S) OF ENTRY: Eyes, skin, mucous membranes

MOST IMPORTANT SYMPTOMS / EFFECTS, ACUTE AND DELAYED:

GENERAL: May cause skin and eye irritation.

EYE CONTACT: Contacted areas may exhibit irritation.

SKIN CONTACT: Contacted areas may exhibit irritation.

INGESTION: May be harmful if swallowed.

INHALATION: May cause nasal and respiratory irritation.

CHRONIC SYMPTOMS: This material contains no ingredient known or suspected to cause cancer.

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED, IF NECESSARY:
If you experience any of the symptoms / effects listed above seek medical advice.

SECTION 5: FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA:
Use extinguishing media as appropriate for surrounding fire.

SPECIFIC HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:
Hazardous reactions will not occur under normal conditions.

ADVICE FOR FIRE FIGHTERS:
Use NIOSH / MSHA approved positive pressure self-contained breathing apparatus when any material is involved in a fire.
Hazardous Combustion Products: Phosphorus oxides, nitrogen oxides, carbon monoxide, carbon dioxide.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES:
Impermeable type gloves. Safety eyewear to protect against unexpected splashes. Use NIOSH / MSHA approved positive pressure self-contained breathing apparatus when any material is involved in a fire.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:
Contain liquid spills with sand and absorb on inert material. Dispose with solid waste. See Waste Disposal Method. Flush remainder to drain with water

SAFETY DATA SHEET

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING:	Wear proper safety equipment when handling this product. Handle in accordance with good industrial hygiene and safety procedures.
CONDITIONS FOR SAFE STORAGE, INCLUDING INCOMPATIBILITIES:	Normal for acidic materials. Store away from alkalis. Keep container closed when not in use. Always add acids to water; never add water to acids.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES:

CHEMICAL IDENTITY	CAS NO.	OSHA PEL	ACGIH TLV
Phosphoric acid	7664-38-2	1 mg/M^3	1 mg/M^3
Nitrates, as NO_3	Not applicable	N.E.	N.E.

ENGINEERING CONTROLS:
As necessary to avoid inhalation and contact.

INDIVIDUAL PROTECTION MEASURES:
Selection of personal protective equipment should be based upon the anticipated exposure and made in accordance with OSHA's Personal Protective Equipment Standard found in 29 CFR 1910 Subpart I. The following information may be used to assist in PPE selection.

RESPIRATORY PROTECTION:
Not needed for normal use.

SKIN PROTECTION:
Impermeable type gloves. Other equipment as required to avoid contact.

EYE PROTECTION:
Safety eyewear to protect against unexpected splashes.

GENERAL HYGIENE CONSIDERATIONS:
Eyewash facility and emergency shower should be in close proximity. Always wash hands after handling any chemical.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear straw colored liquid.
ODOR:	Mild
ODOR THRESHOLD:	Not available.
pH (100%):	1.5 – 2.0
MELTING POINT/FREEZING POINT	Not available.
INITIAL BOILING POINT AND BOILING RANGE	215°F (101°C)
FLASH POINT (METHOD USED)	Not available.
EVAPORATION RATE	1.0 (Water = 1.0).
FLAMMABILITY (SOLID, GAS)	Not available.
UPPER/LOWER FLAMMABLE OR EXPLOSIVE LIMIT	Not available.
VAPOR PRESSURE	Not available.
VAPOR DENSITY	Not available.
SPECIFIC GRAVITY	1.10
SOLUBILITY IN WATER	Complete.
PARTITION COEFFICIENT: N-OCTANOL/WATER	Not available.
AUTO-IGNITION TEMPERATURE	Not available.
VISCOSITY, DYNAMIC	Not available.
DECOMPOSITION TEMPERATURE	Not available.
VISCOSITY	Not available.

SAFETY DATA SHEET

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY:	Hazardous reactions will not occur under normal conditions.
CHEMICAL STABILITY:	Material is stable.
POSSIBILITY OF HAZARDOUS REACTIONS:	Hazardous polymerization will not occur.
CONDITIONS TO AVOID:	No data found.
INCOMPATIBLE MATERIALS:	Alkaline materials
HAZARDOUS DECOMPOSITION PRODUCTS:	Phosphorus oxides, nitrogen oxides, carbon monoxide, carbon doxide.

SECTION 11: TOXOLOGICAL INFORMATION

ACUTE TOXICITY:	Not classified
LD50 AND LC50 DATA:	Not available.
ROUTES OF EXPOSURE / SYMPTOMS	
EYES:	WARNING! Causes eye irritation
SKIN:	WARNING! Causes mild skin irritation.
INGESTION:	WARNING! May be harmful if swallowed.
INHALATION:	WARNING! May cause nasal and respiratory irritation.
GERM CELL MUTAGENICITY:	Not classified.
TERATOGENICITY:	Not available.
CHRONIC EFFECTS / CARCINOGENICITY:	This material contains no ingredient above de minimus concentrations known or suspected to cause cancer.
SPECIFIC TARGET ORGAN TOXICITY (Repeated exposure):	Not classified.
REPRODUCTIVE TOXICITY:	Not classified.
SPECIFIC TARGET ORGAN TOXICITY (Single exposure):	Not classified.
ASPIRATION HAZARD:	Not classified.

COMPONENT INFORMATION:

Phosphoric acid	LD50 Oral Rat:	1530 mg/kg
	LD50 Dermal Rabbit:	2740 mg/kg
	LC50 Inhalation:	No data.
Nitrates (sodium nitrate)	LD50 Oral rat:	>2000 mg/kg
	LD50 Dermal rat:	>5000 mg/kg
	LC50 Inhalation:	>0.527 mg/L/4 hour

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY: The ecotoxicity of this product is not known. This material contains a toxic chemical listed under SARA 313 (see section 15).

COMPONENT INFORMATION

Phosphoric acid	Freshwater Fish Data:	
	No data available	
	Invertebrate Toxicity Data:	
	No data available.	
Nitrates (sodium nitrate)	Freshwater Fish Data:	
	LC50 freshwater fish:	6000 mg/L/96 hour
	Invertebrate Toxicity Data:	
	LC50 *Daphnia magna*:	8600 mg/L/24 hour

PERSISTENCE AND DEGRADABILITY:	Not available.
BIOACCUMULATIVE POTENTIAL:	Bioaccumulation potential is low
MOBILITY IN SOIL:	Not available.
OTHER ADVERSE EFFECTS:	This material contains no hazardous air pollutants (HAPS). Excess phosphates and nitrates leaching may enrich waters leading to eutrophication.

SAFETY DATA SHEET

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Normal for acidic wastes containing phosphorous compounds. May require pH adjustment for neutralization. Dispose in accordance with local, state and federal regulations.

SECTION 14: TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME:	Compound, Cleaning, NOI, Liquid
HAZARD CLASS:	Not applicable
IDENTIFICATION NUMBER:	Not applicable
PACKING GROUP:	Not applicable
EMERGENCY RESPONSE GUIDE:	Not applicable

SECTION 15: REGULATORY INFORMATION

VOC:	0.02 pounds per gallon (2 grams per liter).
TSCA STATUS	All ingredients are listed on the TSCA inventory.
CERCLA REPORTABLE QUANTITY	5,000 pounds for phosphoric acid (approximately 10,857 gallons)

SARA 311 / 312 HAZARD CLASSES

x	ACUTE HEALTH
	FIRE
	SUDDEN RELEASE OF PRESSURE
	CHRONIC HEALTH
	REACTIVE

SARA 312 INFORMATION: Storage of 10,000 pounds or more may require filing a Tier 2 form. Threshold planning quantity for reporting is 10,000 pounds. This material is not an extremely hazardous substance (EHS).

SARA 313 INFORMATION: This material contains the following substances subject to the reporting requirements of Section 313 of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372

CHEMICAL NAME	CATEGORY CODE	CAS NUMBER	% BY WEIGHT
Nitrate compounds (as NO_3)	N511	NA	1

STATE REGULATORY INFORMATION

CALIFORNIA PROPOSITION 65: California has not identified the ingredients listed in Section 3 as known to cause cancer or reproductive toxicity.

SECTION 16: OTHER INFORMATION

MSDS STATUS: Revised Sections 1, 2 and 16 on 12-04-15.

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0

FOR INDUSTRIAL USE ONLY – KEEP OUT OF THE REACH OF CHILDREN

BRENNTAG

SAFETY DATA SHEET

1. Identification

Product identifier	**LACQUER THINNER 255A66**
Other means of identification	None.
Recommended use	ALL PROPER AND LEGAL PURPOSES
Recommended restrictions	None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name	Brenntag Mid-South, Inc.
Address	1405 Highway 136, West Henderson, KY 42420
Telephone	270-830-1222
E-mail	Not available.
Emergency phone number	800-424-9300 CHEMTREC

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 2
Health hazards	Acute toxicity, inhalation	Category 2
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Reproductive toxicity	Category 1A
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 2
	Aspiration hazard	Category 1
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	

Label elements

Signal word	Danger
Hazard statement	Highly flammable liquid and vapor. May be fatal if swallowed and enters airways. Fatal if inhaled. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. May damage fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.
Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection.

Response	If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Specific treatment is urgent (see this label). If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.
Supplemental information	54.94% of the mixture consists of component(s) of unknown acute dermal toxicity.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
NAPHTHA (PETROLEUM), HYDROTREATED LIGHT		64742-49-0	25.8311
2-BUTANONE		78-93-3	23.9782
BENZENE, METHYL-		108-88-3	20.218
ETHANOL		64-17-5	17.1158
ACETIC ACID, BUTYL ESTER		123-86-4	11.9891
2-PROPANOL		67-63-0	0.8564
METHANOL		67-56-1	0.0026
ACETALDEHYDE		75-07-0	0.0003
Other components below reportable levels			0.0085

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Alcohol resistant foam. Carbon dioxide (CO2). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Highly flammable liquid and vapor.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe vapors or spray mist. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Transfer by mechanical means such as vacuum truck to a salvage tank or other suitable container for recovery or safe disposal. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. Prevent entry into waterways, sewer, basements or confined areas. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water. Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

7. Handling and storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe vapors or spray mist. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices. For additional information on equipment bonding and grounding, refer to the Canadian Electrical Code in Canada, (CSA C22.1), or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity" or National Fire Protection Association (NFPA) 70, "National Electrical Code".

Conditions for safe storage, including any incompatibilities	Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS). Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
2-BUTANONE (CAS 78-93-3)	PEL	590 mg/m3
		200 ppm
2-PROPANOL (CAS 67-63-0)	PEL	980 mg/m3
		400 ppm
ACETALDEHYDE (CAS 75-07-0)	PEL	360 mg/m3
		200 ppm
ACETIC ACID, BUTYL ESTER (CAS 123-86-4)	PEL	710 mg/m3
		150 ppm
ETHANOL (CAS 64-17-5)	PEL	1900 mg/m3
		1000 ppm
METHANOL (CAS 67-56-1)	PEL	260 mg/m3
		200 ppm

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
BENZENE, METHYL- (CAS 108-88-3)	Ceiling	300 ppm
	TWA	200 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
2-BUTANONE (CAS 78-93-3)	STEL	300 ppm
	TWA	200 ppm
2-PROPANOL (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm
ACETALDEHYDE (CAS 75-07-0)	Ceiling	25 ppm
ACETIC ACID, BUTYL ESTER (CAS 123-86-4)	STEL	150 ppm
	TWA	50 ppm
BENZENE, METHYL- (CAS 108-88-3)	TWA	20 ppm
ETHANOL (CAS 64-17-5)	STEL	1000 ppm
METHANOL (CAS 67-56-1)	STEL	250 ppm
	TWA	200 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
2-BUTANONE (CAS 78-93-3)	STEL	885 mg/m3
		300 ppm
	TWA	590 mg/m3
		200 ppm
2-PROPANOL (CAS 67-63-0)	STEL	1225 mg/m3
		500 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
	TWA	980 mg/m3
		400 ppm
ACETIC ACID, BUTYL ESTER (CAS 123-86-4)	STEL	950 mg/m3
		200 ppm
	TWA	710 mg/m3
		150 ppm
BENZENE, METHYL- (CAS 108-88-3)	STEL	560 mg/m3
		150 ppm
	TWA	375 mg/m3
		100 ppm
ETHANOL (CAS 64-17-5)	TWA	1900 mg/m3
		1000 ppm
METHANOL (CAS 67-56-1)	STEL	325 mg/m3
		250 ppm
	TWA	260 mg/m3
		200 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
2-BUTANONE (CAS 78-93-3)	2 mg/l	MEK	Urine	*
2-PROPANOL (CAS 67-63-0)	40 mg/l	Acetone	Urine	*
BENZENE, METHYL- (CAS 108-88-3)	0.3 mg/g	o-Cresol, with hydrolysis	Creatinine in urine	*
	0.03 mg/l	Toluene	Urine	*
	0.02 mg/l	Toluene	Blood	*
METHANOL (CAS 67-56-1)	15 mg/l	Methanol	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

BENZENE, METHYL- (CAS 108-88-3)	Can be absorbed through the skin.
METHANOL (CAS 67-56-1)	Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

BENZENE, METHYL- (CAS 108-88-3)	Skin designation applies.
METHANOL (CAS 67-56-1)	Skin designation applies.

US - Tennessee OELs: Skin designation

METHANOL (CAS 67-56-1)	Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

METHANOL (CAS 67-56-1)	Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

METHANOL (CAS 67-56-1)	Can be absorbed through the skin.

Appropriate engineering controls Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station. Eye wash fountain and emergency showers are recommended.

Individual protection measures, such as personal protective equipment

The following are recommendations for Personnel Protective Equipment (PPE). The employer/user of this product must perform a Hazard Assessment of the workplace according to OSHA regulations 29 CFR 1910.132 to determine the appropriate PPE for use while performing any task involving potential exposure to this product.

Eye/face protection Chemical respirator with organic vapor cartridge and full facepiece.

Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection	Chemical respirator with organic vapor cartridge and full facepiece.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Observe any medical surveillance requirements. When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Liquid.
Color	COLORLESS
Odor	NOT LISTED
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	-114.12 °F (-81.18 °C) estimated
Initial boiling point and boiling range	203.62 °F (95.34 °C) estimated
Flash point	20.0 °F (-6.7 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	1.5 % estimated
Flammability limit - upper (%)	8.4 % estimated
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	742.67 °F (394.82 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	6.67 lbs/gal 0.80 g/ml
Explosive properties	Not explosive.
Flammability class	Flammable IB estimated
Oxidizing properties	Not oxidizing.
Percent volatile	74.17 % estimated
Specific gravity	0.8
VOC	74.16 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Amines. Ammonia. Caustics. Isocyanates. Nitrates.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Fatal if inhaled. May cause damage to organs through prolonged or repeated exposure by inhalation. May cause drowsiness and dizziness. Headache. Nausea, vomiting.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity Fatal if inhaled. May be fatal if swallowed and enters airways.

Components	Species	Test Results
2-BUTANONE (CAS 78-93-3)		
Acute		
Oral		
LD50	Rat	2300 - 3500 mg/kg
2-PROPANOL (CAS 67-63-0)		
Acute		
Oral		
LD50	Rat	4.7 g/kg
ACETALDEHYDE (CAS 75-07-0)		
Acute		
Dermal		
LD50	Rabbit	3540 mg/kg
Oral		
LD50	Rat	661 mg/kg
BENZENE, METHYL- (CAS 108-88-3)		
Acute		
Oral		
LD50	Rat	2.6 g/kg
METHANOL (CAS 67-56-1)		
Acute		
Dermal		
LD50	Rabbit	15800 mg/kg
Inhalation		
LC50	Cat	85.41 mg/l, 4.5 Hours
	Rat	64000 ppm, 4 Hours
		87.5 mg/l, 6 Hours

Components	Species	Test Results
Oral		
LD50	Dog	8000 mg/kg
	Monkey	2 g/kg
	Mouse	7300 mg/kg
	Rabbit	14.4 g/kg
	Rat	5628 mg/kg

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

ACETALDEHYDE (CAS 75-07-0)	2B Possibly carcinogenic to humans.
BENZENE, METHYL- (CAS 108-88-3)	3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

ACETALDEHYDE (CAS 75-07-0)	Reasonably Anticipated to be a Human Carcinogen.

Reproductive toxicity Possible reproductive hazard. May damage fertility or the unborn child.

Specific target organ toxicity - single exposure May cause respiratory irritation. May cause drowsiness and dizziness.

Specific target organ toxicity - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard May be fatal if swallowed and enters airways.

Chronic effects May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
2-BUTANONE (CAS 78-93-3)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	4025 - 6440 mg/l, 48 hours
Fish	LC50	Sheepshead minnow (Cyprinodon variegatus)	> 400 mg/l, 96 hours
2-PROPANOL (CAS 67-63-0)			
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	> 1400 mg/l, 96 hours
ACETALDEHYDE (CAS 75-07-0)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	39.4 - 59.1 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	28 - 34 mg/l, 96 hours
ACETIC ACID, BUTYL ESTER (CAS 123-86-4)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	17 - 19 mg/l, 96 hours

Components		Species	Test Results
BENZENE, METHYL- (CAS 108-88-3)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	5.46 - 9.83 mg/l, 48 hours
Fish	LC50	Coho salmon,silver salmon (Oncorhynchus kisutch)	8.11 mg/l, 96 hours
ETHANOL (CAS 64-17-5)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	7.7 - 11.2 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours
METHANOL (CAS 67-56-1)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	> 10000 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

2-BUTANONE	0.29
2-PROPANOL	0.05
ACETIC ACID, BUTYL ESTER	1.78
BENZENE, METHYL-	2.73
ETHANOL	-0.31
METHANOL	-0.77

Mobility in soil No data available.

Other adverse effects The product contains volatile organic compounds which have a photochemical ozone creation potential.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number UN1263
UN proper shipping name PAINT RELATED MATERIAL, N.O.S.(METHYL ETHYL KETONE, HEPTANE)
Transport hazard class(es)
Class 3
Subsidiary risk -
Packing group II
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
ERG number 128

Transport information on packaging may be different from that listed. Transportation information on packaging may be different from that listed.

IATA

UN number UN1263
UN proper shipping name PAINT RELATED MATERIAL, N.O.S.(METHYL ETHYL KETONE, HEPTANE)
Transport hazard class(es)
Class 3
Subsidiary risk -

Packing group	II
Environmental hazards	No.
ERG Code	128
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

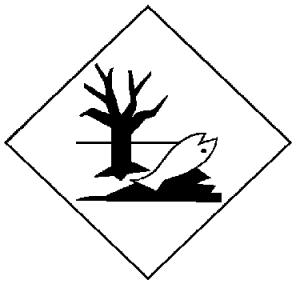
IMDG

UN number	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (2-BUTANONE, BENZENE, METHYL-), MARINE POLLUTANT
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	
Marine pollutant	Yes
EmS	F-E, S-E
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

DOT

IATA; IMDG

Marine pollutant



General information IMDG Regulated Marine Pollutant.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

2-BUTANONE (CAS 78-93-3)	Listed.
ACETALDEHYDE (CAS 75-07-0)	Listed.
ACETIC ACID, BUTYL ESTER (CAS 123-86-4)	Listed.
BENZENE, METHYL- (CAS 108-88-3)	Listed.

METHANOL (CAS 67-56-1) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

Classified hazard categories
Flammable (gases, aerosols, liquids, or solids)
Acute toxicity (any route of exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation
Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)
Aspiration hazard
Hazard not otherwise classified (HNOC)

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
BENZENE, METHYL-	108-88-3	20.218

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

ACETALDEHYDE (CAS 75-07-0)
BENZENE, METHYL- (CAS 108-88-3)
METHANOL (CAS 67-56-1)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

ACETALDEHYDE (CAS 75-07-0)

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

2-BUTANONE (CAS 78-93-3) 6714
BENZENE, METHYL- (CAS 108-88-3) 6594

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

2-BUTANONE (CAS 78-93-3) 35 %WV
BENZENE, METHYL- (CAS 108-88-3) 35 %WV

DEA Exempt Chemical Mixtures Code Number

2-BUTANONE (CAS 78-93-3) 6714
BENZENE, METHYL- (CAS 108-88-3) 594

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

2-BUTANONE (CAS 78-93-3) Low priority
2-PROPANOL (CAS 67-63-0) Low priority
ACETALDEHYDE (CAS 75-07-0) High priority
ACETIC ACID, BUTYL ESTER (CAS 123-86-4) Low priority
ETHANOL (CAS 64-17-5) Low priority

US state regulations

California Proposition 65

WARNING: This product can expose you to chemicals including ACETALDEHYDE, which is known to the State of California to cause cancer, and BENZENE, METHYL-, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Carcinogenic substance

ACETALDEHYDE (CAS 75-07-0) Listed: April 1, 1988

California Proposition 65 - CRT: Listed date/Developmental toxin

BENZENE, METHYL- (CAS 108-88-3) Listed: January 1, 1991
METHANOL (CAS 67-56-1) Listed: March 16, 2012

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

2-BUTANONE (CAS 78-93-3)
2-PROPANOL (CAS 67-63-0)
ACETALDEHYDE (CAS 75-07-0)
BENZENE, METHYL- (CAS 108-88-3)
METHANOL (CAS 67-56-1)
NAPHTHA (PETROLEUM), HYDROTREATED LIGHT (CAS 64742-49-0)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Toxic Chemical Substances (TCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 04-15-2015

Revision date 08-02-2019

Version # 05

HMIS® ratings Health: 3*
Flammability: 3
Physical hazard: 0

NFPA ratings Health: 2
Flammability: 3
Instability: 0

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Revision information This document has undergone significant changes and should be reviewed in its entirety.