ESCO Division
The Weir Group PLC
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ESCO Group LLC -Covington
3792 Lake Park Drive
Covington, KY 41017

May 7, 2025

Division of Air Quality, Permit Review Section
Kentucky Department for Environmental Protection
300 Sower Blvd., 2nd floor
Frankfort, KY 40601

Re: **Air Permit Renewal**
ESCO Group LLC-Covington
Source ID: 21-117-00150
AI: 2457
Permit: F-15-001 R1

Dear Division of Air Quality,

Please find attached the application materials for the renewal of the referenced Air Quality Permit. ESCO Covington does not propose any significant changes necessitating revisions to the current permit. A review of the operations summarized below, revealed the overall processes remain unchanged with only minor adjustments to the coatings utilized in the spray paint booths. These modifications do not place ESCO outside the established parameters of the current permit requirements.

EP02 Welding Operations

The welding operation includes forty- eight (48) manual arc welders, fifteen (15) arc cutters, and two (2) robotic gas metal arc welding stations (MIG). This is a facility wide/area emission source.

Arc Welding

The emissions from the welding process are primarily from the consumption of the welding wire. The shield gas is 92% Argon: 8% Carbon Dioxide. The welding wire usage rate of the 48 manual weld stations is 300 lb/hr (6.25 lb/hr per station). The projected wire usage rate of the robotic welders is 50 lb/hr (25 lb/hr per welding station). The emissions from the manual weld stations are controlled 70% due to the building enclosure. The emissions from the semi-enclosed robotic bucket welder (FANUC Arc Mate 120iC/10L) and lip welder (FANUC Arc Mate 100iC/8L) are reduced 80% and 95%, respectively by add-on cartridge filtering systems. The emissions are exhausted from the facility through roof vents and cross ventilation fans. There is no stack.

Emission Factor (total particulates)

The AWS classification of the welding wire used by ESCO is ER70S-6. The AP-42 emission factor for this electrode is 5.2 lb/10^3 lb of electrode consumed (AP-42, Table 12.19-1).

Total Particulate Emission Calculations

Wire usage (48) Manual Welders: 300 lb wire /hr
(2) Robotic Welders: 50 lb wire/hr

Emission Factor (EF): 5.2 lb/10^3 lb wire (0.0052 lb/lb wire)

Control Efficiency (CE): (48) Manual Welders: 70%
Robotic Welder (bucket): 80%
Robotic Welder (lip): 95%

Welding Process	**Wire Usage** (lb wire/hr)	**EF** (lb/lb wire)	**CE** (%)	**Emission Rate*** (lb/hr)	**PTE (T/yr)** (8,760 hrs)
Manual	300	0.0052	70%	0.468	2.05
Robotic (bucket)	25	0.0052	80%	0.026	0.11
Robotic (lip)	25	0.0052	95%	0.007	0.03
Totals	350			0.501	2.19

** Allowable: 2.34 lb/hr (KAR 59:010)*

HAP Emission Calculations

(48) Manual Arc Welders

Element	**Electrode Consumption** (10^3 lb/hr)	**Emission Factor*** (lb/lb wire)	**CE** (%)	**Emission Rate** (lb/hr)	**PTE (T/yr)** (8,760 hrs)
Chromium	0.300	0.001	70	0.0001	0.876
Cobalt	0.300	0.001	70	0.0001	0.876
Manganese	0.300	0.318	70	0.318	250.5
Nickel	0.300	0.001	70	0.001	0.876

Robotic Bucket Welder (FANUC Arc Mate 120iC/10L)

Element	**Electrode Consumption** (10^3 lb/hr)	**Emission Factor*** (lb/lb wire)	**CE** (%)	**Emission Rate** (lb/hr)	**PTE (T/yr)** (8,760 hrs)
Chromium	0.025	0.001	80	0.00001	0.0876
Cobalt	0.025	0.001	80	0.00001	0.0876
Manganese	0.025	0.318	80	0.0016	14.016
Nickel	0.025	0.001	80	0.00001	0.0876

Robotic Lip Welder (FANUC Arc Mate 100iC/8L)

Element	**Electrode Consumption** (10^3 lb/hr)	**Emission Factor*** (lb/lb wire)	**CE** (%)	**Emission Rate** (lb/hr)	**PTE (T/yr)** (8,760 hrs)
Chromium	0.025	0.001	95	0.000001	0.00876
Cobalt	0.025	0.001	95	0.000001	0.00876
Manganese	0.025	0.318	95	0.000318	3.48648
Nickel	0.025	0.001	95	0.000001	0.00876

*AP-42, Table 12.19-2(10^{-1} lb/10^3lb of electrode consumed)

Arc Cutting

Fifteen manual arc welders are adaptable and dedicated for air carbon arc cutting (CAC-A). A consumable electrode creates an arc with the base metal. The molten metal is blown away by an air jet. The arc cutting process is primarily used to remove old welds and hardware and gouge a new groove for rewelding.

Emissions are produced from both the electrode and the base metal within this process. The electrode is composed of a copper-clad carbon graphite rod, while the base metals predominantly include Alloy Plate Steel (A-514) and Carbon Plate Steel (A-572). In rare instances, Alloy Plate Steel (AR-400) may also be utilized as a base metal. Currently, there are no reliable emission factors established for the CAC-A process. It is likely that a substantial portion of the emissions consists of ferrous oxide fumes resulting from the volatilization of the plate steel, which contains more than 97% iron. This analysis is conducted considering potential emissions from uncontrolled hand scarfing, which is estimated at (0.11 pounds per ton of steel scarfed).*

The volume of steel removed

Cut length:	12 inches per minute (720 inches per hour)
Cut Width (Kerf):	0.5 inches
Cut Depth:	0.5 inches
Therefore:	Length x width x depth = volume
	720 in/hr x 0.5 in x 0.5 in = 180 in^3/hr

Weight of steel removed

Weight of steel:	1 in^3 = 0.278 lb.
Therefore:	180in^3 x 0.278 lb./in^3 = 50.04 lb/hr (0.025 T/hr)

**Fugitive Emissions from the Integrated Iron and Steel Plants,* EPA-600/2-78-050, Midwest Research Institute, March 1978, Table 3-1

Emission factor (total particulate)

0.11 lb/T steel removed x 0.025 T steel removed/hr = 0.003 lb/hr (per arc cutter)
0.003 lb/hr x 15 arc cutters = 0.045 lb/hr
The potential to emit is 0.045 lb/hr x 8,760 hr/yr = 394.2 lb/yr

Welding Operation Particulate Emission Total

	Lb/hr*	PTE TPY
(48) Manual Arc Welders	0.468	2.05
(2) Robotic Welders	0.033	0.14
(15) Arc Cutters	0.045	0.20
	0.546	**2.39**

*Allowable: 2.34 lb/hr (KAR 59:010)

03 Shot Blast Cabinet

Equipment description: Pangborn shot blast

The shot blast cabinet is utilized for the processing and finishing of steel implements. These implements undergo blasting both prior to the commencement of welding and following the completion of welding, prior to the application of protective coatings. The cabinet operates as an enclosed closed-loop system. Fine particulate dust is efficiently captured by a cartridge dust collector with a collection efficiency exceeding 99%, prior to being expelled into the atmosphere. Heavier particulates descend through a grate located at the cabinet's floor and are transported via an auger to a collection bin for potential reuse.

The abrasive material employed consists of steel shot and grit. The hose blast capacity is measured at 400 pounds of abrasive per hour (0.40 x 10^3 lb abrasive/hr). According to the AP-42 Emission Factor for abrasive blasting of unspecified metal components, controlled using a fabric filter, the emission factor is 0.69 pounds per 1,000 pounds of abrasive (referencing Table 13.2.6-1).

Particulate Emissions

0.4. x 10^3 lb abrasive/hr x 0.69 lb/10^3 abrasive = 0.276 lb/hr*
**Allowable: 2.34 lb/hr (KAR59:010, Section 3(2)*

Potential Emissions

0.276 lb/hr x 8,760 hr/yr = 2,418 lb/yr = 1.21 T/yr

HAP Emissions

It is assumed that the emission rate of hazardous pollutants correlates directly with the elemental content of the steel shot abrasive blasting media (refer to the attached Safety Data Sheet).

Manganese	(1.30 %):	0.276 lb/hr x 0.013 = 0.004 lb/hr 1.21 T/yr x 0.013 = 0.016 T/yr
Nickel	(0.20 %):	0.276 lb/hr x 0.002 = 0.00055 lb/hr 1.21 T/yr x 0.002 = 0.002 T/yr

The Safety Data Sheet identifies red phosphorus (CAS 7723-14-0) as a third hazardous air pollutant. While elemental phosphorus is categorized as a HAP by the United States Environmental Protection Agency (EPA) in its white or yellow allotrope forms, the product contains solely red phosphorus, which is not subject to HAP regulations.

04 Paint Spray Booths

This emission point is two paint spray booths: K001 – DeVilbiss

K002 – JBI

ESCO Covington submitted an off-permit change on March 11, 2025, which outlined changes to the paint selection presented in the last permit renewal. The off-permit change notification discussed the transition from Baril 710 to the Jones Blair Stantest, and addressed the changes in VOC and HAPs concentrations.

Upon depletion of the Baril 710, ESCO's coating line will comprise three coatings. The projected annual usage rates are as follows: Jones Blair Stantest at approximately 88%, HP 196-4360/59 at around 12%, and HP Alkyd Shop Primer 963-73 at about 1%. ESCO will continue to utilize the exempt solvent acetone for purging and cleaning the spray line. The average solvent usage is expected to be 10% of the Jones Blair Stantest. The solvent will be reclaimed for reuse until the concentration reaches an approximate ratio of 50% solvent to 50% solids. The spent solvent will be transported off-site for recycling.

The coatings will be applied without any dilution and will be utilized in both spray booths. The same two applicators will be employed with the conventional airless spray gun for the Jones Blair Stantest coating, as well as the high-volume low-pressure (HVLP) gun designated for HR 196-4360/59 and HR 963-73 Shop Primer. The maximum application rate will remain constant at 6.0 gallons per hour, equating to 3.0 gallons per hour for each booth.

All coatings are designed for air drying and are specifically formulated for ground-engaging construction implements exposed to outdoor and/or harsh environmental conditions. The Jones Blair Stantest and HP 196-4360/59 comply with 401 KAR 61:132 Section 6(1)(b) exemption, maintaining a volatile organic compound (VOC) content of less than 3.5 pounds per gallon.

Coating Specifications (SDS attached)

Product	*Density (lb/gal)*	*VOC (lb/gal)*	*Solids (% wt)*	*Total HAP (% wt)*	*Usage (%)*
HP 196-4360/59	8.80	2.84	34.00	0.00	12
HP 963-73 (Primer) least used	12.12	2.84	78.00	3.00	<1
Jones Blair Stantest	9.82	2.67	41.00	0.30	6
Baril 710 (to be phased out)	8.31	3.46	48.50	0.00	82

The estimated usage rate of the Jones Blair Stantest 2.8 coating over the next year will be equal to the combination of Baril 710 and its replacement Jones Blair Stantest 88%.

Revised Potential to Emit (PTE)

The highest emissions of total volatile organic compounds (VOCs) and hazardous air pollutants (HAPs) are produced by the shop primer (HP 963-73), which is the least utilized product in the coating lineup.

The subsequent emissions calculations are predicated on the application of the shop primer in both spray booths at maximum capacity, and these figures should be regarded as representing "worst-case" emission scenarios.

Particulate Emissions

Product	Usage Rate (gal/hr)	Density (lb/gal)	Solids (% wt)	TE[a] (%)	CE[b] (%)	ER[c] (lb/hr)	PTE TPY (8,760 hr/yr)
HP 963-73	6.0	12.125	78.00	75	(1-99%)	0.14186	0.621

[a] Transfer efficiency is estimated based on product size and spray application.
[b] Control efficiency is estimated to be 99% due to exhaust filters
[c] Emission rate allowable: 2.34 lb/hr (KAR 59:010, Section 3(2).

Total Volatile Organic Compounds Emissions

Product	Usage Rate (gal/hr)	VOC (lb/gal)	VOC ER[1] (lb/hr)	PTE TPY[2] (8,760 hr/yr)
HP 963-73 (Primer)	6.0	2.84	17.04	74.64

[1] *2.84(lb/gal)*6(gal/hr)*
[2] *[17.04(lb/hr)*8,760(hr/yr)]/2,000*

Hazardous Air Pollutant Emissions (HP 963-73 Primer)

Element	VOC Emission Rate[1] (lb/hr)	HAP (%wt)	HAP ER[2] (lb/hr)	PTE TPY[3] (8,760 hr/yr)
Ethylbenzene (HP 963-73 Primer)	17.04	0.5	0.43	1.87
Xylene (HP963-73 Primer)	17.04	2.5	0.08	0.37
4-methylpentan-2-one (Jones Blair Stantest)	16.02	0.3	0.048	0.21
Ethylbenzene (Jones Blair Stantest)	16.02	0.3	0.048	0.21
Total				2.66

[1] *17.04 lb/hr from Total VOC Emissions*
[2] *Ethylbenzene (17.04 lb/hr * 0.005) and Xylene (17.04 lb/hr * 0.025)*
[3] *HAP ER (lb/hr) / 2000 * 8,760(hr/yr)*

ESCO is classified as a Conditional Major Facility and is subject to emission limitations as stipulated under 401 KAR 52:030. The following table presents a summary of the actual emissions from the facility for the year 2024, along with a comparison of potential emissions against the regulatory allowances.

	Actual 2024 (TPY)	Potential (TPY)	Allowable (TPY)
Volatile Organic Compounds	2.72	74.64*	20
Hazardous Air Pollutants	0	2.24	13
Hazardous Air Pollutant	0	1.87	9

** Unlikely "worst case" as source is a primer coating used only for specialty jobs with an annual usage of less than 50 gallons.*

05 Area Spray Operation

This emission point is the area spray painting of construction implements which are too large for the paint spray booths. The implements are spray painted manually with a HVLP spray gun within the facility. There is no solvent used and only one applicator.

Coating Specifications:

Product	**Density** (lb/gal)	**VOC** (lb/gal)	**Solids** (% wt)	**HAP** (% wt)
HP 196-4360/59	8.80	2.84	34.00	0.00

Particulate Emissions

Product	**Usage Rate** (gal/hr)	**Density** (lb/gal)	**Solids** (% wt)	**TE[a]** (%)	**CE[b]** (%)	**ER** (lb/hr)	**PTE TPY** (8,760 hr/yr)
HP 196-4360/59	3.0	8.80	34.00	65	70	0.96	4.20

[a] *Manufacturer's specification (Binks SV100 HVLP)*
[b] *Assume 70% control efficiency due to building enclosure*

Total VOC Emissions

Product	**Usage Rate** (gal/hr)	**VOC** (lb/gal)	**VOC ER[1]** (lb/hr)	**PTE TPY[2]** (8,760 hr/yr)
HP 196-4360/59	3.0	2.84	8.52	37.32

[1] *2.84(lb/gal)*3(gal/hr)*
[2] *[8.52(lb/hr)*8,760(hr/yr)]/2,000*

Hazardous Air Polluants : Not Applicable

In conclusion, ESCO Covington is not proposing any new changes to its emission sources from the current permit and requests continued permit coverage. The emissions generated from the facility's welding operations, arc cutting, shot blast cabinet, and paint spray booths have been comprehensively detailed, demonstrating adherence to environmental standards and the implementation of effective emission control measures. The mitigation strategies in place significantly reduce the potential emissions from these operations. Ongoing monitoring and adherence to established standards will ensure that facility operations remain compliant with air quality regulations. As such, we look forward to your timely review and approval of this permit renewal.

For all inquiries related to facility operations and permit matters, please direct correspondence to Mr. Basil Hozeska at (859)-344-5816. The individual responsible for overseeing these operations is Mr. Michael Jefferson at (859)-344-5846.

Sincerely,

Mike Jefferson
Site Manager

Enclosures:	DEP7007AI	Administrative Information
	DEP7007B	Manufacturing or Processing Operations
	DEP7007K	Surface coating or Printing Operations
	SDS	Baril 710
	SDS	Harrison Paint Company 963-73
	SDS	Harrison Paint Company 196-4359/60
	Letter	Harrison Paint Company 196-4359/60 HAPS letter
	SDS	Jones Blair Stantest 2.8 Alkyd Enamel
	SDS	Superior Acetone
	SDS	Ervin Blast grit
	Map	Facility Flow map

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: **Esco Group LLC - Covington**

KY EIS (AFS) #: **21- 117-00150**

Permit #: **F-20-010**

Agency Interest (AI) ID: **2457**

Date: **5/5/2025**

Section AI.1: Source Information

Physical Location Address:	**Street:**	3792 Lake Park Drive				
	City:	Covington	**County:**	KY	**Zip Code:**	41017
Mailing Address:	**Street or P.O. Box:**	"Same as above"				
	City:		**State:**		**Zip Code:**	

Standard Coordinates for Source Physical Location

Longitude: 84.528611 (decimal degrees) **Latitude:** 39.013889 (decimal degrees)

Primary (NAICS) Category: Construction Machinery **Primary NAICS #:** 333120

Classification (SIC) Category: Construction Machinery **Primary SIC #:** 3531

Briefly discuss the type of business conducted at this site: Manufacturing/Fabrication of steel implements for the construction and forestry industry

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: 40

Approximate distance to nearest residence or commercial property: *600 Feet*

Property Area: 8.32

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
Solid Waste:	☐ Currently Hold	☐ Need	☑ N/A
RCRA:	☐ Currently Hold	☐ Need	☑ N/A
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: Esco Group LLC - Covington

Title: (if individual)

Mailing Address:
Street or P.O. Box: 3792 Lake Park Drive
City: Covington **State:** KY **Zip Code:** 41017

Email: (if individual)

Phone: (859) 344-5800

Technical Contact

Name: Basil Hozeska

Title: EHS Specialist/SHE Generalist

Mailing Address:
Street or P.O. Box: 3792 Lake Park Drive
City: Covington **State:** KY **Zip Code:** 41017

Email: Basil.hozeska@mail.weir

Phone: (859) 307-1967

Air Permit Contact for Source

Name: Basil Hozeska

Title: EHS Specialist/SHE Specialist

Mailing Address:
Street or P.O. Box: 3792 Lake Park Drive
City: Covington **State:** KY **Zip Code:** 41017

Email: Basil.Hozeska@mail.weir

Phone: (859) 307-1967

Section AI.3: Owner Information

☐ **Owner same as applicant**

Name: ESCO Group LLC

Title:

Mailing Address: **Street or P.O. Box:** 1631 NW Thurman Street

City: Portland **State:** OR **Zip Code:** 97209

Email:

Phone: (503) 778-2141

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

Name	Position
The Weir Group PLC	Parent Company

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 OperatingPermit
☐ 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		☐ Single HAP	
☐ Volatile Organic Compounds (VOC)		☐ Combined HAPs	
☐ Carbon Monoxide		☐ Air Toxics (40 CFR 68, Subpart F)	
☐ Nitrogen Oxides		☐ Carbon Dioxide	
☐ Sulfur Dioxide		☐ Greenhouse Gases (GHG)	
☐ Lead		☐ Other	

For New Construction:

Proposed Start Date of Construction: *(MM/YYYY)* _____ **Proposed Operation Start-Up Date:** *(MM/YYYY)* _____

For Modifications:

Proposed Start Date of Modification: *(MM/YYYY)* _____ **Proposed Operation Start-Up Date:** *(MM/YYYY)* _____

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
- [x] DEP7007B Manufacturing or Processing Operations
- [ ] DEP7007C Incinerators and Waste Burners
- [ ] DEP7007F Episode Standby Plan
- [ ] DEP7007J Volatile Liquid Storage
- [x] 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
- [x] Flowcharts or diagrams depicting process
- [ ] Digital Line Graphs (DLG) files of buldings, roads, etc.
- [x] Site Map
- [ ] Map or drawing depicting location of facility
- [x] Safety Data Sheet (SDS)
- [ ] Emergency Response Plan
- [ ] Other: _____

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.

Michael Jefferson	5/20/25
Authorized Signature	**Date**
Michael Jefferson	Site Manager
Type or Printed Name of Signatory	**Title of Signatory**

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

Section AI.7: Notes, Comments, and Explanations

Division for Air Quality

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

DEP7007B

Manufacturing or Processing Operations

___ Section B.1: Process Information
___ Section B.2: Materials and Fuel Information
___ Section B.3: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI, DEP7007N, DEP7007V, and DEP7007GG.
___ Attach a flow diagram
___ Attach SDS

Source Name: ESCO Group LLC-Covington
KY EIS (AFS) #: 21- 117-00150
Permit #: F-20-010
Agency Interest (AI) ID: 2457
Date: 5/2/2025

Section B.1: Process Information

Emission Unit #	Emission Unit Name	Describe Emission Unit	Process ID	Process Name	Manufacturer	Model No.	Proposed/Actual Date of Construction Commencement *(MM/YYYY)*	Is the Process Continuous or Batch?	Number of Batches per 24 Hours *(if applicable)*	Hours per Batch *(if applicable)*
2	Arc Welding	(48) Arc Welders	Welding	Welding	N/A	N/A	09/1989-10/2015	Batch	N/A	N/A
		(15) Arc Cutters	Cutting	Cutting	N/A	N/A	10/2015	Batch	N/A	N/A
		(1) Robotic Welder	Bucket Welding	Welding	Fanuc	12iC/10L	10/2014	Batch	N/A	N/A
		(1) Robotic Welder	Lip Welding	Welding	Fanuc	100iC/8L	04/2019	Batch	N/A	N/A

Section B.2: Materials and Fuel Information

**Maximum yearly fuel usage rate only applies if applicant request operating restrictions through federally enforceable limitations.*

Emission Unit #	Emission Unit Name	Name of Raw Materials Input	Maximum Quantity of Each Raw Material Input		Total Process Weight Rate for Emission Unit *(tons/hr)*	Name of Finished Materials	Maximum Quantity of Each Finished Material Output		Fuel Type	Maximum Hourly Fuel Usage Rate		Maximum Yearly Fuel Usage Rate		Sulfur Content *(%)*	Ash Content *(%)*
				(Specify Units/hr)				*(Specify Units/hr)*			*(Specify Units)*		*(Specify Units)*		
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Section B.3: Notes, Comments, and Explanations

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: **ESCO Group LLC-Covington**

KY EIS (AFS) #: **21- 117-00150**

Permit #: **F-20-010**

Agency Interest (AI) ID: **2457**

Date: **5/2/2025**

Section K.1: Process Information

Emission Unit #: EP-04

Emission Unit Name: Paint Spray Booths K001/002

Coating/Printing Line Name: K001 (DeVilbiss) and K002 (JBL)

Proposed/Actual Date of Construction: *(MM/YYYY)* K001 09/1989, K002 12/1999

List Applicable Regulations: 401 Kar 59:010, 401 KAR 63:020, 401 KAR 61:132

Describe Overall Process: Two paint spray booths for the manual spray application of surface coatings to steel construction implements.

Describe Coatings/Printing Materials: Jones Blair Stantest (Low VOC/HAP enamel), HP 196-4359/60 (water reducible), HP 963-73 (shop primer), Baril 710 (non-HAP enamel) to be phased out in 2025

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

DEP7007K

Provide detailed description of material coated/printed:

Steel Implements such as excavation buckets, mining buckets, forestry drag chains, fiber(wood) processing chain, hammers, and cable swaggers.

Provide approximate dimensions and range of sizes of parts being coated or printed:

4 ft. x 6 ft. x 8 ft Is the maximum size for spray booths.

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

Describe Surface Preparation/Pretreatment Steps:

Shot Blast

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

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

Describe Final Product:

Coated Excavation and Forestry wear products (i.e., excavation buckets, chains, drive sprokets, hammers).

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
K001	Spray Coating	☐ Conventional Air Gun ☑ Airless ☐ HVLP ☐ Electrostatic ☐ LVLP ☐ Aerosol Spray Can ☐ Other	☑ Manual ☐ Automatic	3	gal/hr	☐ Testing ☑ Equipment Specification Sheet ☐ Estimation
K002	Spray Coating	☐ Conventional Air Gun ☑ Airless ☑ HVLP ☐ Electrostatic ☐ LVLP ☐ Aerosol Spray Can ☐ Other	☑ Manual ☐ Automatic	3	gal/hr	☐ 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:	N/A

K.2B: For Brush Coating

Describe Function:	N/A
Maximum Coating Application Rate: *(gal/hr)*	

K.2C: For Roller Coating

Roller Coat ID	Describe Function	Maximum Coating Application Rate (gal/hr)	Describe how maximum rate was determined
N/A			☐ Testing ☐ Estimation ☐ Equipment Specification Sheet
			☐ Testing ☐ Estimation ☐ Equipment Specification Sheet
			☐ Testing ☐ Estimation ☐ Equipment Specification Sheet

K.2D: For Powder Coating

Powder Coat ID	Describe Function	Maximum Coating Application Rate *(gal/hr or lb/hr)*		Describe how maximum rate was determined
N/A				☐ Testing ☐ Estimation ☐ Equipment Specification Sheet
				☐ Testing ☐ Estimation ☐ Equipment Specification Sheet
				☐ Testing ☐ Estimation ☐ Equipment Specification Sheet
				☐ Testing ☐ Estimation ☐ Equipment Specification Sheet

If powder coating material is recycled, describe:	

K.2E: For Flow Coating

Flow Coat ID	Describe Function	Maximum Coating Application Rate *(gal/hr or lb/hr)*		Describe how maximum rate was determined
N/A				☐ Testing ☐ Estimation ☐ Equipment Specification Sheet
				☐ Testing ☐ Estimation ☐ Equipment Specification Sheet
				☐ Testing ☐ Estimation ☐ Equipment Specification Sheet
				☐ Testing ☐ Estimation ☐ Equipment Specification Sheet

K.2F: For Dip Tank/Electrodeposition Coating

Tank ID	Describe Function	Maximum Make-up Rate *(gal/hr or lb/hr)*		Describe how maximum rate was determined
N/A				☐ Testing ☐ Estimation ☐ Equipment Specification Sheet
				☐ Testing ☐ Estimation ☐ Equipment Specification Sheet
				☐ Testing ☐ Estimation ☐ Equipment Specification Sheet
				☐ Testing ☐ Estimation ☐ Equipment Specification Sheet

Section K.3: Other Operations

K.3A: For Finishing

Describe Finishing Processes: *Complete Form DEP7007B as applicable*	Coated parts are placed on a skid and air dried in the shop. Paint will be completely dry before moving or placing outside.

K.3B: For Curing/Drying

Describe Curing/Drying Processes:	Description	Rated Capacity *(MMBtu/hr)*	Fuel	Control Device/Stack ID
Air Dried	Air dried in shop	N/A	N/A	N/A

K.3C: For Purge

Type: Acetone

Daily Usage: 0.36 gal/day

K.3D: For Clean-up

Type: ☑ Manual ☐ Automatic

Daily Usage: 0.5 hrs/day

Operating Hours: 5200 hr/yr (10 hrs x 2 Shifts x 5 days x 52 weeks)

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
Baril 710 (obsolete)	Coating	K001/002	40200101	Gallons	8.31	4.03	3.46	4.03 lb/gallon	75	3.46 lb/gallon	PM 99	K001/002
HP 196-4359/60	Coating	K002	40200101	Gallons	8.80	2.99	2.84	2.99 lb/gallon	75	2.84 lb/gallon	PM 99	K002
HP 963-73	Primer	K002	40200101	Gallons	12.13	9.46	2.84	9.46 lb/gallon	75	2.84 lb/gallon	PM 99	K002
Jones Blair Stantest	Coating	K001/002	40200101	Gallons	9.82	4.03	2.67	4.03 lb/gallon	75	2.67 lb/gallon	PM 99	K001/002
Acetone	Solvent	K001/002	N/A	N/A	6.63	0	6.63	0	N/A	6.63/gallon	N/A	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
HP 963-73	Ethylbenzene	100-41-4	V	0.5	0.000607	K002
HP 963-73	Xylene	1330-20-7	V	2.5	0.003033	K002
Jones Blair Stantest	Ethylbenzene	100-41-4	V	0.3	0.000295	K001/002
Jones Blair Stantest	4-methylpentan-2-one	108-10-1	V	0.3	0.000225	K001/K002

Section K.6: Notes, Comments, and Explanations

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/01/2024 Reviewed on 05/01/2024

1 Identification

· **Product identifier**

· **Trade name: Bariline 710 High Gloss Alkyd Enamel White**

· **Article number:** 710W099

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Baril Coatings USA
401 Growth Parkway
Angola, IN 46703

· **Information department:** Product safety department
· **Emergency telephone number:** During normal opening times: +1 (260) 665-8431

2 Hazard(s) identification

· **Classification of the substance or mixture**

GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.

GHS08 Health hazard

Muta. 1B H340 May cause genetic defects.
Carc. 1B H350 May cause cancer.

GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

· **Label elements**
· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS02 GHS07 GHS08

· **Signal word** Danger

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/01/2024 Reviewed on 05/01/2024

Trade name: Bariline 710 High Gloss Alkyd Enamel White

(Contd. of page 1)

· **Hazard-determining components of labeling:**
titanium dioxide
Solvent naphtha (petroleum), light arom.
Naphtha (petroleum), hydrotreated heavy
2-butanone oxime
· **Hazard statements**
Highly flammable liquid and vapor.
May cause an allergic skin reaction.
May cause genetic defects.
May cause cancer.
· **Precautionary statements**
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
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.
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF exposed or concerned: Get medical advice/attention.
Specific treatment (see on this label).
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 0
Fire = 3
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = *1
Fire = 3
Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/01/2024 Reviewed on 05/01/2024

Trade name: Bariline 710 High Gloss Alkyd Enamel White

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3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**		
13463-67-7	titanium dioxide	>10-≤25%
123-86-4	n-butyl acetate	>10-<20%
79-20-9	methyl acetate	>2.5-<10%
110-43-0	Methyl n-amyl ketone	>2.5-≤10%
1330-20-7	xylene	>2.5-<10%
64742-95-6	Solvent naphtha (petroleum), light arom.	>2.5-≤10%
108-65-6	2-methoxy-1-methylethyl acetate	>2.5-≤10%
540-88-5	tert-butyl acetate	>2.5-≤10%
64742-47-8	Distillates (petroleum), hydrotreated light	≤2.5%
64742-48-9	Naphtha (petroleum), hydrotreated heavy	≥0.1-≤2.5%
96-29-7	2-butanone oxime	≥0.1-<1%

4 First-aid measures

· **Description of first aid measures**
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:** Immediately rinse with water.
· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing:** If symptoms persist consult doctor.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **Special hazards arising from the substance or mixture** No further relevant information available.
· **Advice for firefighters**
· **Protective equipment:** No special measures required.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.

(Contd. on page 4)

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· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents

· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
13463-67-7	titanium dioxide	30 mg/m³
123-86-4	n-butyl acetate	5 ppm
79-20-9	methyl acetate	250 ppm
110-43-0	Methyl n-amyl ketone	150 ppm
1330-20-7	xylene	130 ppm
108-65-6	2-methoxy-1-methylethyl acetate	50 ppm
540-88-5	tert-butyl acetate	600 ppm
1344-28-1	aluminium oxide	15 mg/m³
64742-48-9	Naphtha (petroleum), hydrotreated heavy	350 mg/m³
7631-86-9	silicon dioxide, chemically prepared	18 mg/m³
1314-23-4	zirconium dioxide	14 mg/m³
96-29-7	2-butanone oxime	30 ppm
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	9.3 mg/m³
111-76-2	2-butoxyethanol	60 ppm

· **PAC-2:**		
13463-67-7	titanium dioxide	330 mg/m³
123-86-4	n-butyl acetate	200 ppm
79-20-9	methyl acetate	1,700 ppm
110-43-0	Methyl n-amyl ketone	670 ppm
1330-20-7	xylene	920* ppm
108-65-6	2-methoxy-1-methylethyl acetate	1,000 ppm
540-88-5	tert-butyl acetate	1,700 ppm
1344-28-1	aluminium oxide	170 mg/m³
64742-48-9	Naphtha (petroleum), hydrotreated heavy	1,800 mg/m³
7631-86-9	silicon dioxide, chemically prepared	740 mg/m³
1314-23-4	zirconium dioxide	110 mg/m³
96-29-7	2-butanone oxime	56 ppm
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	100 mg/m³
111-76-2	2-butoxyethanol	120 ppm

· **PAC-3:**		
13463-67-7	titanium dioxide	2,000 mg/m³
123-86-4	n-butyl acetate	3000* ppm
79-20-9	methyl acetate	10000* ppm
110-43-0	Methyl n-amyl ketone	4000* ppm
1330-20-7	xylene	2500* ppm

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108-65-6	2-methoxy-1-methylethyl acetate	5000* ppm
540-88-5	tert-butyl acetate	10,000 ppm
1344-28-1	aluminium oxide	990 mg/m³
64742-48-9	Naphtha (petroleum), hydrotreated heavy	40,000 mg/m³
7631-86-9	silicon dioxide, chemically prepared	4,500 mg/m³
1314-23-4	zirconium dioxide	680 mg/m³
96-29-7	2-butanone oxime	250 ppm
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	230 mg/m³
111-76-2	2-butoxyethanol	700 ppm

7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
· **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store in a cool location.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

123-86-4 n-butyl acetate	
PEL	Long-term value: 710 mg/m³, 150 ppm
REL	Short-term value: 950 mg/m³, 200 ppm Long-term value: 710 mg/m³, 150 ppm
TLV	Short-term value: 712 mg/m³, 150 ppm Long-term value: 238 mg/m³, 50 ppm
79-20-9 methyl acetate	
PEL	Long-term value: 610 mg/m³, 200 ppm

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REL	Short-term value: 760 mg/m³, 250 ppm Long-term value: 610 mg/m³, 200 ppm
TLV	Short-term value: 757 mg/m³, 250 ppm Long-term value: 606 mg/m³, 200 ppm
110-43-0 Methyl n-amyl ketone	
PEL	Long-term value: 465 mg/m³, 100 ppm
REL	Long-term value: 465 mg/m³, 100 ppm
TLV	Long-term value: 233 mg/m³, 50 ppm
1330-20-7 xylene	
PEL	Long-term value: 435 mg/m³, 100 ppm
REL	Short-term value: 655 mg/m³, 150 ppm Long-term value: 435 mg/m³, 100 ppm
TLV	Short-term value: 651 mg/m³, 150 ppm Long-term value: 434 mg/m³, 100 ppm BEI
108-65-6 2-methoxy-1-methylethyl acetate	
WEEL	Long-term value: 50 ppm
540-88-5 tert-butyl acetate	
PEL	Long-term value: 950 mg/m³, 200 ppm
REL	Long-term value: 950 mg/m³, 200 ppm
TLV	Short-term value: 712 mg/m³, 150 ppm Long-term value: 238 mg/m³, 50 ppm
96-29-7 2-butanone oxime	
WEEL	Long-term value: 10 ppm DSEN

· **Ingredients with biological limit values:**

1330-20-7 xylene	
BEI	1.5 g/g creatinine Medium: urine Time: end of shift Parameter: Methylhippuric acids

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
· **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Liquid
Color:	White
· **Odor:**	Solvent-like
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	57 °C (134.6 °F)
· **Flash point:**	-10 °C (14 °F)
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	370 °C (698 °F)
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/ vapor mixtures are possible.
· **Explosion limits:**	
Lower:	1.2 Vol %
Upper:	7.5 Vol %
· **Vapor pressure at 20 °C (68 °F):**	10.7 hPa (8 mm Hg)
· **Density at 20 °C (68 °F):**	1.11 g/cm³ (9.26 lbs/gal)
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.

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· **Solubility in / Miscibility with Water:**	Miscible
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	33.2 %
VOC content:	33.15 % 368.0 g/l / 3.07 lb/gal
Solids content:	58.4 % (by weight)
· **Other infomation:**	No further relevant information available.

10 Stability and reactivity

· **Reactivity** No further relevant information available.
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
64742-95-6 Solvent naphtha (petroleum), light arom.		
Oral	LD50	>6,800 mg/kg (rat)
Dermal	LD50	>3,400 mg/kg (rab)
Inhalative	LC50/4 h	>10.2 mg/l (rat)
64742-48-9 Naphtha (petroleum), hydrotreated heavy		
Oral	LD50	>5,000 mg/kg (rat)
Dermal	LD50	>3,000 mg/kg (rab)

· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** No irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Carcinogenic.
The product can cause inheritable damage.

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· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
13463-67-7	titanium dioxide	2B
1330-20-7	xylene	3
7631-86-9	silicon dioxide, chemically prepared	3
111-76-2	2-butoxyethanol	3

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 3 (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**	
· **DOT, IMDG, IATA**	UN1263
· **UN proper shipping name**	
· **DOT**	Paint
· **IMDG, IATA**	PAINT

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· **Transport hazard class(es)**	
· **DOT**	
	
· **Class**	3 Flammable liquids
· **Label**	3
· **IMDG, IATA**	
	
· **Class**	3 Flammable liquids
· **Label**	3
· **Packing group**	
· **DOT, IMDG, IATA**	II
· **Environmental hazards:**	Not applicable.
· **Special precautions for user**	Warning: Flammable liquids
· **Danger code (Kemler):**	33
· **EMS Number:**	F-E,S-E
· **Stowage Category**	B
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **DOT**	
· **Quantity limitations**	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
· **IMDG**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **UN "Model Regulation":**	UN 1263 PAINT, 3, II

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Sara**

· **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**	
1330-20-7	xylene
1344-28-1	aluminium oxide
111-76-2	2-butoxyethanol

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Safety Data Sheet
acc. to OSHA HCS

Printing date 05/01/2024

Reviewed on 05/01/2024

Trade name: Bariline 710 High Gloss Alkyd Enamel White

(Contd. of page 10)

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

13463-67-7	titanium dioxide

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

1330-20-7	xylene	I
111-76-2	2-butoxyethanol	NL

· **TLV (Threshold Limit Value established by ACGIH)**

13463-67-7	titanium dioxide	A4
1330-20-7	xylene	A4
1344-28-1	aluminium oxide	A4
1314-23-4	zirconium dioxide	A4
111-76-2	2-butoxyethanol	A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

13463-67-7	titanium dioxide

· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS02 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
titanium dioxide
Solvent naphtha (petroleum), light arom.
Naphtha (petroleum), hydrotreated heavy
2-butanone oxime
· **Hazard statements**
Highly flammable liquid and vapor.
May cause an allergic skin reaction.
May cause genetic defects.
May cause cancer.
· **Precautionary statements**
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.

(Contd. on page 12)

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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.
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF exposed or concerned: Get medical advice/attention.
Specific treatment (see on this label).
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
In case of fire: Use for extinction: CO2, powder or water spray.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

· **Information about limitation of use:**
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Environment protection department.
· **Contact:** Mr. Williams
· **Date of preparation / last revision** 05/01/2024 / -
· **Abbreviations and acronyms:**
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
BEI: Biological Exposure Limit
Flam. Liq. 2: Flammable liquids – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
Muta. 1B: Germ cell mutagenicity – Category 1B
Carc. 1B: Carcinogenicity – Category 1B

Safety Data Sheet

according to OSHA HCS 2012 (CFR 29 1910.1200)

Printing date: 07/01/2015 *Revised on: 07/01/2015*

1 Identification

· **Product identifier:**

· **Product Name:** Alkyd Shop Primer

· **Product Number:** 963-73

· **Relevant identified uses of the substance or mixture and uses advised against:**
No further relevant information available.

· **Manufacturer/Supplier:**
Harrison Paint Company
1329 Harrison Ave SW
CANTON, OH 44706
USA

· **Information telephone number:** 330-455-5125
· **Emergency telephone number:** 330-455-5125

2 Hazard identification

· **Classification of the substance or mixture:**

Flam. Liq. 2	H225	Highly flammable liquid and vapor.
Skin Sens. 1	H317	May cause an allergic skin reaction.
Carc. 1A	H350	May cause cancer.
Asp. Tox. 1	H304	May be fatal if swallowed and enters airways.

· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms:**

GHS02 GHS07 GHS08

· **Signal word:** Danger

· **Hazard-determining components of labeling:**
Solvent naphtha (petroleum), light aliph.
titanium dioxide
Quartz (SiO2)
2-butanone oxime
· **Hazard statements:**
Highly flammable liquid and vapor.
May cause an allergic skin reaction.
May cause cancer.
May be fatal if swallowed and enters airways.
· **Precautionary statements:**
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Use explosion-proof electrical/ventilating/lighting/equipment.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves / eye protection / face protection.
Ground/bond container and receiving equipment.
Keep container tightly closed.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Contaminated work clothing must not be allowed out of the workplace.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
If swallowed: Immediately call a doctor.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Specific treatment (see on this label).

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Safety Data Sheet

according to OSHA HCS 2012 (CFR 29 1910.1200)

Printing date: 07/01/2015 *Revised on: 07/01/2015*

Product Name: Alkyd Shop Primer

(Contd. from page 1)

Wash contaminated clothing before reuse.
IF exposed or concerned: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.
Do NOT induce vomiting.
In case of fire: Use for extinction: CO2, sand, extinguishing powder.
Store locked up.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 2
Fire = 3
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = *2
Fire = 3
Reactivity = 0

· **Other hazards:**
· **Results of PBT and vPvB assessment:**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixture**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Hazardous components:**		
471-34-1	calcium carbonate	30-40%
64742-89-8	Solvent naphtha (petroleum), light aliph.	10-20%
1332-58-7	Kaolin	10-20%
13463-67-7	titanium dioxide	5-<10%
64742-47-8	Distillates (petroleum), hydrotreated light	5-<10%
1330-20-7	xylene	1-2.5%
14808-60-7	Quartz (SiO2)	0.1-≤1%
100-41-4	ethylbenzene	0.1-≤0.5%
96-29-7	2-butanone oxime	0.1-≤0.5%

4 First-aid measures:

· **Description of first aid measures:**
· **For inhalation:** Supply fresh air; consult doctor in case of complaints.
· **For skin contact:** Generally the product does not irritate the skin.
· **For eye contact:** Rinse opened eye for several minutes under running water.
· **For swallowing:**
Do not induce vomiting; immediately call for medical help.
A person vomiting while lying on their back should be turned onto their side.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed:** No further relevant information available.

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Safety Data Sheet

according to OSHA HCS 2012 (CFR 29 1910.1200)

Printing date: 07/01/2015 *Revised on: 07/01/2015*

Product Name: Alkyd Shop Primer

(Contd. from page 2)

· **Indication of any immediate medical attention and special treatment needed:**
No further relevant information available.

5 Fire-fighting measures:

· **Extinguishing media:**
· **Suitable extinguishing agents:** CO2, sand, extinguishing powder. Do not use water.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **Special hazards arising from the substance or mixture:** No further relevant information available.
· **Advice for firefighters:**
· **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures:

· **Personal precautions, protective equipment and emergency procedures:**
Wear protective equipment. Keep unprotected persons away.
· **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, universal binder or other inert absorbent).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
· **Reference to other sections:**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage:

· **Handling:**
· **Precautions for safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

· **Conditions for safe storage, including any incompatibilities:**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
· **Specific end use(s):** No further relevant information available.

8 Exposure controls/personal protection:

· **Additional information about design of technical systems:** No further data; see item 7.

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Safety Data Sheet

according to OSHA HCS 2012 (CFR 29 1910.1200)

Printing date: 07/01/2015 *Revised on: 07/01/2015*

Product Name: Alkyd Shop Primer

(Contd. from page 3)

· **Control parameters:**

· **Components with limit values that require monitoring at the workplace:**	
471-34-1 calcium carbonate	
PEL	Long-term value: 15* 5** mg/m³ *total dust **respirable fraction
REL	Long-term value: 10* 5** mg/m³ *total dust **respirable fraction
TLV	TLV withdrawn
1332-58-7 Kaolin	
PEL	Long-term value: 15* 5** mg/m³ *total dust **respirable fraction
REL	Long-term value: 10* 5** mg/m³ *total dust **respirable fraction
TLV	Long-term value: 2* mg/m³ E; as respirable fraction
1330-20-7 xylene	
PEL	Long-term value: 435 mg/m³, 100 ppm
REL	Short-term value: 655 mg/m³, 150 ppm Long-term value: 435 mg/m³, 100 ppm
TLV	Short-term value: 651 mg/m³, 150 ppm Long-term value: 434 mg/m³, 100 ppm BEI

· **Ingredients with biological limit values:**	
1330-20-7 xylene	
BEI	1.5 g/g creatinine Medium: urine Time: end of shift Parameter: Methylhippuric acids

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls:**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Wash hands before eating, smoking, using the restroom and at the end of the workday.
· **Breathing equipment:**
In case of brief exposure or low concentrations, use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
· **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· **Material of gloves:**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material:**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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Product Name: Alkyd Shop Primer

(Contd. from page 4)

· **Eye protection:**

Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties:**	
· **General Information:**	
· **Appearance:**	
Form:	Liquid
Color:	Off White
· **Odor:**	Solvent Like
· **Odour threshold:**	Not determined.
· **pH-value:**	Not applicable.
· **Change in condition:**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	119 °C (246 °F)
· **Flash point:**	21 °C (70 °F)
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	210 °C (410 °F)
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapor pressure:**	Not determined.
· **Density at 20 °C (68 °F):**	1.453 g/cm³ (12.125 lbs/gal)
· **Relative density:**	Not determined.
· **Vapour density:**	Heavier than air.
· **Evaporation rate:**	Slower than ether.
· **Solubility in / Miscibility with:**	
Water:	Not miscible or difficult to mix.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	22.0 %
VOC content:	22.0 % <340 g/l
Solids content:	78.0 %

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Product Name: Alkyd Shop Primer

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· **Other information:** No further relevant information available.

10 Stability and reactivity

· **Reactivity:**
· **Chemical stability:**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions:** No dangerous reactions known.
· **Conditions to avoid:** Do not store or use near sparks, flame, or other ignition sources.
· **Incompatible materials:** Strong acids and alkalis, bleach, strong oxidizers.
· **Hazardous decomposition products:**
Burning may yield carbon monoxide, carbon dioxide, oxides of nitrogen, and various hydrocarbons.

11 Toxicological information

· **Information on toxicological effects:**
· **Acute toxicity:**
· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** No irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:

· **Carcinogenic categories:**

· **IARC (International Agency for Research on Cancer):**		
13463-67-7	titanium dioxide	2B
1330-20-7	xylene	3
14808-60-7	Quartz (SiO2)	1
100-41-4	ethylbenzene	2B
1333-86-4	Carbon black	2B
14464-46-1	cristobalite	1
68955-83-9	Fatty Acids, C9-13-neo-, cobalt salts	2B
27253-31-2	Neodecanoic Acid,, cobalt salt	2B

· **NTP (National Toxicology Program):**		
14808-60-7	Quartz (SiO2)	K
14464-46-1	cristobalite	K

· **OSHA-Ca (Occupational Safety & Health Administration):**
None of the ingredients is listed.

12 Ecological information

· **Toxicity:**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability:** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential:** No further relevant information available.
· **Mobility in soil:** No further relevant information available.
· **Additional ecological information:**
· **General notes:** Not known to be hazardous to water.

(Contd. on page 7)

Safety Data Sheet

according to OSHA HCS 2012 (CFR 29 1910.1200)

Printing date: 07/01/2015 *Revised on: 07/01/2015*

Product Name: Alkyd Shop Primer

(Contd. from page 6)

· **Results of PBT and vPvB assessment:**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects:** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods:**
· **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information:

· **UN-Number:**	
· **DOT, IMDG, IATA**	UN1263
· **UN proper shipping name:**	
· **DOT**	Paint
· **IMDG, IATA**	PAINT
· **Transport hazard class(es):**	
· **DOT**	
· **Class**	3 Flammable liquids
· **Label**	3
· **IMDG, IATA**	
· **Class**	3 Flammable liquids
· **Label**	3
· **Packing group:**	
· **DOT, IMDG, IATA**	II
· **Environmental hazards:**	
· **Marine pollutant:**	No
· **Special precautions for user:**	Warning: Flammable liquids
· **Danger code (Kemler):**	33
· **EMS Number:**	F-E,S-E
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:**	Not applicable.
· **Transport/Additional information:**	
· **DOT**	
· **Quantity limitations:**	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L

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Safety Data Sheet

according to OSHA HCS 2012 (CFR 29 1910.1200)

Printing date: 07/01/2015 *Revised on: 07/01/2015*

Product Name: Alkyd Shop Primer

(Contd. from page 7)

· **IMDG**	
· **Limited quantities (LQ):**	5L
· **Excepted quantities (EQ):**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **UN "Model Regulation":**	UN1263, Paint, 3, II

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
· **SARA:**

· **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

1330-20-7	xylene
100-41-4	ethylbenzene
71-36-3	butan-1-ol
68955-83-9	Fatty Acids, C9-13-neo-, cobalt salts
27253-31-2	Neodecanoic Acid,, cobalt salt
111-77-3	2-(2-methoxyethoxy)ethanol

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed.

· **Proposition 65:**

· **Chemicals known to cause cancer:**

13463-67-7	titanium dioxide
14808-60-7	Quartz (SiO2)
100-41-4	ethylbenzene
1333-86-4	Carbon black
14464-46-1	cristobalite

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Carcinogenic categories:**

· **EPA (Environmental Protection Agency)**

1330-20-7	xylene	I
100-41-4	ethylbenzene	D
71-36-3	butan-1-ol	D

· **TLV (Threshold Limit Value established by ACGIH)**

1332-58-7	Kaolin	A4
13463-67-7	titanium dioxide	A4
1330-20-7	xylene	A4
14808-60-7	Quartz (SiO2)	A2

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Safety Data Sheet

according to OSHA HCS 2012 (CFR 29 1910.1200)

Printing date: 07/01/2015 *Revised on: 07/01/2015*

Product Name: Alkyd Shop Primer

(Contd. from page 8)

100-41-4	ethylbenzene	A3
1333-86-4	Carbon black	A4
14464-46-1	cristobalite	A2

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**	
13463-67-7	titanium dioxide
14808-60-7	Quartz (SiO2)
1333-86-4	Carbon black
14464-46-1	cristobalite

· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms:**

GHS02 GHS07 GHS08

· **Signal word:** Danger

· **Hazard-determining components of labeling:**
Solvent naphtha (petroleum), light aliph.
titanium dioxide
Quartz (SiO2)
2-butanone oxime
· **Hazard statements:**
Highly flammable liquid and vapor.
May cause an allergic skin reaction.
May cause cancer.
May be fatal if swallowed and enters airways.
· **Precautionary statements:**
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Use explosion-proof electrical/ventilating/lighting/equipment.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves / eye protection / face protection.
Ground/bond container and receiving equipment.
Keep container tightly closed.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Contaminated work clothing must not be allowed out of the workplace.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
If swallowed: Immediately call a doctor.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Specific treatment (see on this label).
Wash contaminated clothing before reuse.
IF exposed or concerned: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.
Do NOT induce vomiting.
In case of fire: Use for extinction: CO2, sand, extinguishing powder.
Store locked up.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

(Contd. on page 10)

Safety Data Sheet

according to OSHA HCS 2012 (CFR 29 1910.1200)

Printing date: 07/01/2015 *Revised on: 07/01/2015*

Product Name: Alkyd Shop Primer

(Contd. from page 9)

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Laboratory
· **Contact:** Laboratory Manager
· **Date of preparation / last revision:** 07/01/2015 / -
· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
Flam. Liq. 2: Flammable liquids, Hazard Category 2
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Carc. 1A: Carcinogenicity, Hazard Category 1A
Asp. Tox. 1: Aspiration hazard, Hazard Category 1

Safety Data Sheet

according to OSHA HCS 2012 (CFR 29 1910.1200)

Printing date: 11/06/2017 *Revised on: 09/02/2016*

1 Identification

· **Product identifier:**

· **Product Name:** DTM W/R Alkyd Enamel

· **Product Number:** 196-4359

· **Relevant identified uses of the substance or mixture and uses advised against:**
No further relevant information available.

· **Manufacturer/Supplier:**
Harrison Paint Company
1329 Harrison Ave SW
Canton, OH 44706
USA

· **Information telephone number:** 330-455-5125
· **Emergency telephone number:** 330-455-5125

2 Hazard identification

· **Classification of the substance or mixture:**

Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2A	H319	Causes serious eye irritation.
Skin Sens. 1	H317	May cause an allergic skin reaction.
Muta. 1B	H340	May cause genetic defects.
Carc. 1B	H350	May cause cancer.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms:**

GHS07 GHS08

· **Signal word:** Danger

· **Hazard-determining components of labeling:**
Naphtha (petroleum), hydrotreated heavy
2,4,7,9-tetramethyldec-5-yne-4,7-diol
2-butanone oxime
· **Hazard statements:**
Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.
May cause genetic defects.
May cause cancer.
· **Precautionary statements:**
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves / eye protection / face protection.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see on this label).

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Safety Data Sheet

according to OSHA HCS 2012 (CFR 29 1910.1200)

Printing date: 11/06/2017 *Revised on: 09/02/2016*

Product Name: DTM W/R Alkyd Enamel

(Contd. from page 1)

Wash contaminated clothing before reuse.
IF exposed or concerned: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
If on skin: Wash with plenty of water.
Take off contaminated clothing and wash it before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 2
Fire = 2
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = *2
Fire = 2
Reactivity = 0

· **Other hazards:**
· **Results of PBT and vPvB assessment:**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixture**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Hazardous components:**		
111-76-2	2-butoxyethanol	10-<20%
471-34-1	calcium carbonate	2.5-5%
1332-37-2	Iron oxide	1-2.5%
13463-67-7	titanium dioxide	0.1-≤1%
96-29-7	2-butanone oxime	0.1-≤0.5%
1336-21-6	ammonia	0.1-≤0.5%
126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol	0.1-≤0.5%
64742-48-9	Naphtha (petroleum), hydrotreated heavy	0.1-≤0.5%

4 First-aid measures:

· **Description of first aid measures:**
· **For inhalation:** Supply fresh air; consult doctor in case of complaints.
· **For skin contact:** Generally the product does not irritate the skin.
· **For eye contact:** Rinse opened eye for several minutes under running water.
· **For swallowing:**
Do not induce vomiting; immediately call for medical help.
A person vomiting while lying on their back should be turned onto their side.

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· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed:** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed:**
No further relevant information available.

5 Fire-fighting measures:

· **Extinguishing media:**
· **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **Special hazards arising from the substance or mixture:** No further relevant information available.
· **Advice for firefighters:**
· **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures:

· **Personal precautions, protective equipment and emergency procedures:** Not required.
· **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, universal binder or other inert absorbent).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
· **Reference to other sections:**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage:

· **Handling:**
· **Precautions for safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
· **Information about protection against explosions and fires:** Keep respiratory protective device available.

· **Conditions for safe storage, including any incompatibilities:**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
· **Specific end use(s):** No further relevant information available.

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8 Exposure controls/personal protection:

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters:**

· **Components with limit values that require monitoring at the workplace:**	
111-76-2 2-butoxyethanol	
PEL	Long-term value: 240 mg/m³, 50 ppm Skin
REL	Long-term value: 24 mg/m³, 5 ppm Skin
TLV	Long-term value: 97 mg/m³, 20 ppm BEI
471-34-1 calcium carbonate	
PEL	Long-term value: 15* 5** mg/m³ *total dust **respirable fraction
REL	Long-term value: 10* 5** mg/m³ *total dust **respirable fraction
TLV	TLV withdrawn
1332-37-2 Iron oxide	
REL	Long-term value: 1 mg/m³ as Fe
TLV	Long-term value: 1 mg/m³ as Fe

· **Ingredients with biological limit values:**	
111-76-2 2-butoxyethanol	
BEI	200 mg/g creatinine Medium: urine Time: end of shift Parameter: Butoxyacetic acid with hydrolysis

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls:**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before eating, smoking, using the restroom and at the end of the workday.
Store protective clothing separately.
· **Breathing equipment:**
In case of brief exposure or low concentrations, use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves:**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material:**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties:**	
· **General Information:**	
· **Appearance:**	
Form:	Liquid
Color:	Esco Red
· **Odor:**	Characteristic
· **Odour threshold:**	Not determined.
· **pH-value at 20 °C (68 °F):**	8.4
· **Change in condition:**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C (212 °F)
· **Flash point:**	60 °C (140 °F)
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	240 °C (464 °F)
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	1.1 Vol %
Upper:	10.6 Vol %
· **Vapor pressure at 20 °C (68 °F):**	23 hPa (17 mm Hg)
· **Density at 20 °C (68 °F):**	1.055 g/cm³ (8.804 lbs/gal)
· **Relative density:**	Not determined.
· **Vapour density:**	Heavier than air.
· **Evaporation rate:**	Slower than ether.

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· **Solubility in / Miscibility with:**	
Water:	Fully miscible.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	14.1 %
Water:	52.3 %
VOC content:	14.1 % <340 g/l
Solids content:	33.6 %
· **Other information:**	No further relevant information available.

10 Stability and reactivity

· **Reactivity:**
· **Chemical stability:**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions:** No dangerous reactions known.
· **Conditions to avoid:** Do not store or use near sparks, flame, or other ignition sources.
· **Incompatible materials:** Strong acids and alkalis, bleach, strong oxidizers.
· **Hazardous decomposition products:**
Burning may yield carbon monoxide, carbon dioxide, oxides of nitrogen, and various hydrocarbons.

11 Toxicological information

· **Information on toxicological effects:**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
64742-48-9 Naphtha (petroleum), hydrotreated heavy		
Oral	LD50	>5000 mg/kg (rat)
Dermal	LD50	>3000 mg/kg (rab)

· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** No irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Carcinogenic.
The product can cause inheritable damage.

· **Carcinogenic categories:**

· **IARC (International Agency for Research on Cancer):**		
111-76-2	2-butoxyethanol	3
13463-67-7	titanium dioxide	2B

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27253-31-2	Neodecanoic Acid,, cobalt salt	2B
14808-60-7	Quartz (SiO2)	1
1330-20-7	xylene	3
98-82-8	cumene	2B
100-41-4	ethylbenzene	2B

· **NTP (National Toxicology Program):**

14808-60-7	Quartz (SiO2)	K
98-82-8	cumene	R

· **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients is listed.

12 Ecological information

· **Toxicity:**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability:** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential:** No further relevant information available.
· **Mobility in soil:** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **Results of PBT and vPvB assessment:**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects:** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods:**
· **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information:

· **UN-Number:**	
· **DOT, ADN, IMDG, IATA**	Not Regulated
· **UN proper shipping name:**	
· **DOT**	This material has a flash point at or above 38°C and may be reclassified as a combustible liquid. A combustible liquid in non-bulk packaging (≤450 liters; ≤119 gallons) is exempt from the DOT regulation when transported by ground.

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· **ADN, IMDG, IATA**	Not Regulated
· **Transport hazard class(es):**	
· **DOT**	
· **Class**	Not Regulated This material has a flash point at or above 38°C and may be reclassified as a combustible liquid. A combustible liquid in non-bulk packaging (≤450 liters; ≤119 gallons) is exempt from the DOT regulation when transported by ground.
· **ADN/R Class:**	Not Regulated
· **Packing group:**	
· **DOT, IMDG, IATA**	Not Regulated
· **Environmental hazards:**	
· **Marine pollutant:**	No
· **Special precautions for user:**	Not applicable.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:**	Not applicable.
· **UN "Model Regulation":**	-

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
· **SARA:**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

111-76-2	2-butoxyethanol
1336-21-6	ammonia
107-21-1	ethanediol
27253-31-2	Neodecanoic Acid,, cobalt salt
147-14-8	Phthalocyanine Blue
71-36-3	butan-1-ol
95-63-6	1,2,4-trimethylbenzene
111-77-3	2-(2-methoxyethoxy)ethanol
1330-20-7	xylene
98-82-8	cumene
100-41-4	ethylbenzene

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65:**

· **Chemicals known to cause cancer:**

13463-67-7	titanium dioxide
64742-47-8	Distillates (petroleum), hydrotreated light

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14808-60-7	Quartz (SiO2)
98-82-8	cumene
100-41-4	ethylbenzene

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

64742-47-8	Distillates (petroleum), hydrotreated light

· **Carcinogenic categories:**

· **EPA (Environmental Protection Agency)**

111-76-2	2-butoxyethanol	NL
71-36-3	butan-1-ol	D
1330-20-7	xylene	I
98-82-8	cumene	D, CBD
100-41-4	ethylbenzene	D

· **TLV (Threshold Limit Value established by ACGIH)**

111-76-2	2-butoxyethanol	A3
13463-67-7	titanium dioxide	A4
107-21-1	ethanediol	A4
14808-60-7	Quartz (SiO2)	A2
1330-20-7	xylene	A4
100-41-4	ethylbenzene	A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

13463-67-7	titanium dioxide
14808-60-7	Quartz (SiO2)

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms:**

GHS07 GHS08

· **Signal word:** Danger

· **Hazard-determining components of labeling:**
Naphtha (petroleum), hydrotreated heavy
2,4,7,9-tetramethyldec-5-yne-4,7-diol
2-butanone oxime
· **Hazard statements:**
Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.
May cause genetic defects.
May cause cancer.

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· **Precautionary statements:**
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves / eye protection / face protection.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see on this label).
Wash contaminated clothing before reuse.
IF exposed or concerned: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
If on skin: Wash with plenty of water.
Take off contaminated clothing and wash it before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

· **Information about limitation of use:**
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.
Exceptions can be made by the authorities in certain cases.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Laboratory
· **Contact:** Laboratory Manager
· **Date of preparation / last revision:** 11/06/2017 / -
· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Muta. 1B: Germ cell mutagenicity, Hazard Category 1B
Carc. 1B: Carcinogenicity, Hazard Category 1B

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1 Identification

· **Product identifier:**

· **Product Name:** DTM W/R Alkyd Enamel

· **Product Number:** 196-4360

· **Relevant identified uses of the substance or mixture and uses advised against:**
No further relevant information available.

· **Manufacturer/Supplier:**
Harrison Paint Company
1329 Harrison Ave SW
Canton, OH 44706
USA

· **Information telephone number:** 330-455-5125

· **Emergency telephone number:** 330-455-5125

2 Hazard identification

· **Classification of the substance or mixture:**

Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2A	H319	Causes serious eye irritation.
Skin Sens. 1	H317	May cause an allergic skin reaction.
Muta. 1B	H340	May cause genetic defects.
Carc. 1B	H350	May cause cancer.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms:**

GHS07 GHS08

· **Signal word:** Danger

· **Hazard-determining components of labeling:**
Naphtha (petroleum), hydrotreated heavy
2-butanone oxime

· **Hazard statements:**
Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.
May cause genetic defects.
May cause cancer.

· **Precautionary statements:**
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves / eye protection / face protection.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see on this label).
Wash contaminated clothing before reuse.

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IF exposed or concerned: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
If on skin: Wash with plenty of water.
Take off contaminated clothing and wash it before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 2
Fire = 2
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = *2
Fire = 2
Reactivity = 0

· **Other hazards:**
· **Results of PBT and vPvB assessment:**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixture**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Hazardous components:**		
111-76-2	2-butoxyethanol	10-<20%
471-34-1	calcium carbonate	5-<10%
13463-67-7	titanium dioxide	0.1-≤1%
1336-21-6	ammonia	0.1-≤0.5%
96-29-7	2-butanone oxime	0.1-≤0.5%
64742-48-9	Naphtha (petroleum), hydrotreated heavy	0.1-≤0.5%

4 First-aid measures:

· **Description of first aid measures:**
· **For inhalation:** Supply fresh air; consult doctor in case of complaints.
· **For skin contact:** Generally the product does not irritate the skin.
· **For eye contact:** Rinse opened eye for several minutes under running water.
· **For swallowing:**
Do not induce vomiting; immediately call for medical help.
A person vomiting while lying on their back should be turned onto their side.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed:** No further relevant information available.

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· **Indication of any immediate medical attention and special treatment needed:**
No further relevant information available.

5 Fire-fighting measures:

· **Extinguishing media:**
· **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **Special hazards arising from the substance or mixture:** No further relevant information available.
· **Advice for firefighters:**
· **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures:

· **Personal precautions, protective equipment and emergency procedures:** Not required.
· **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, universal binder or other inert absorbent).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
· **Reference to other sections:**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage:

· **Handling:**
· **Precautions for safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
· **Information about protection against explosions and fires:** Keep respiratory protective device available.

· **Conditions for safe storage, including any incompatibilities:**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
· **Specific end use(s):** No further relevant information available.

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Product Name: DTM W/R Alkyd Enamel

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8 Exposure controls/personal protection:

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters:**

· **Components with limit values that require monitoring at the workplace:**	
111-76-2 2-butoxyethanol	
PEL	Long-term value: 240 mg/m³, 50 ppm Skin
REL	Long-term value: 24 mg/m³, 5 ppm Skin
TLV	Long-term value: 97 mg/m³, 20 ppm BEI
471-34-1 calcium carbonate	
PEL	Long-term value: 15* 5** mg/m³ *total dust **respirable fraction
REL	Long-term value: 10* 5** mg/m³ *total dust **respirable fraction
TLV	TLV withdrawn

· **Ingredients with biological limit values:**	
111-76-2 2-butoxyethanol	
BEI	200 mg/g creatinine Medium: urine Time: end of shift Parameter: Butoxyacetic acid with hydrolysis

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls:**

· **Personal protective equipment:**

· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before eating, smoking, using the restroom and at the end of the workday.
Store protective clothing separately.

· **Breathing equipment:**
In case of brief exposure or low concentrations, use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves:**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

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· **Penetration time of glove material:**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:**

Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties:**	
· **General Information:**	
· **Appearance:**	
Form:	Liquid
Color:	Esco Green
· **Odor:**	Ether-like
· **Odour threshold:**	Not determined.
· **pH-value at 20 °C (68 °F):**	8.4
· **Change in condition:**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	> 100 °C (> 212 °F)
· **Flash point:**	60 °C (140 °F)
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	240 °C (464 °F)
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	1.1 Vol %
Upper:	10.6 Vol %
· **Vapor pressure at 20 °C (68 °F):**	23 hPa (17 mm Hg)
· **Density at 20 °C (68 °F):**	1.077 g/cm³ (8.988 lbs/gal)
· **Relative density:**	Not determined.
· **Vapour density:**	Heavier than air.
· **Evaporation rate:**	Slower than ether.
· **Solubility in / Miscibility with:**	
Water:	Fully miscible.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.

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Safety Data Sheet

according to OSHA HCS 2012 (CFR 29 1910.1200)

Printing date: 09/01/2016 *Revised on: 09/01/2016*

Product Name: DTM W/R Alkyd Enamel

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· **Solvent content:**	
Organic solvents:	14.2 %
Water:	51.0 %
VOC content:	14.2 % <340 g/l
Solids content:	34.8 %
· **Other information:**	No further relevant information available.

10 Stability and reactivity

· **Reactivity:**
· **Chemical stability:**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions:** No dangerous reactions known.
· **Conditions to avoid:** Do not store or use near sparks, flame, or other ignition sources.
· **Incompatible materials:** Strong acids and alkalis, bleach, strong oxidizers.
· **Hazardous decomposition products:**
Burning may yield carbon monoxide, carbon dioxide, oxides of nitrogen, and various hydrocarbons.

11 Toxicological information

· **Information on toxicological effects:**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
64742-48-9 Naphtha (petroleum), hydrotreated heavy		
Oral	LD50	>5000 mg/kg (rat)
Dermal	LD50	>3000 mg/kg (rab)

· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** No irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Carcinogenic.
The product can cause inheritable damage.

· **Carcinogenic categories:**

· **IARC (International Agency for Research on Cancer):**		
111-76-2	2-butoxyethanol	3
13463-67-7	titanium dioxide	2B
27253-31-2	Neodecanoic Acid,, cobalt salt	2B
14808-60-7	Quartz (SiO2)	1
1330-20-7	xylene	3
98-82-8	cumene	2B
100-41-4	ethylbenzene	2B

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according to OSHA HCS 2012 (CFR 29 1910.1200)

Printing date: 09/01/2016 *Revised on: 09/01/2016*

Product Name: DTM W/R Alkyd Enamel

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· **NTP (National Toxicology Program):**		
14808-60-7	Quartz (SiO2)	K
98-82-8	cumene	R

· **OSHA-Ca (Occupational Safety & Health Administration):**
None of the ingredients is listed.

12 Ecological information

· **Toxicity:**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability:** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential:** No further relevant information available.
· **Mobility in soil:** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **Results of PBT and vPvB assessment:**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects:** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods:**
· **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information:

· **UN-Number:** · **DOT, ADN, IMDG, IATA**	Not Regulated
· **UN proper shipping name:** · **ADN, IMDG, IATA**	Not Regulated
· **Transport hazard class(es):** · **DOT, ADN, IMDG, IATA** · **Class**	Not Regulated
· **Packing group:** · **DOT, IMDG, IATA**	Not Regulated

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Product Name: DTM W/R Alkyd Enamel

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· **Environmental hazards:**	
· **Marine pollutant:**	No
· **Special precautions for user:**	Not applicable.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:**	Not applicable.
· **UN "Model Regulation":**	-

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
· **SARA:**

· **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

111-76-2	2-butoxyethanol
1336-21-6	ammonia
107-21-1	ethanediol
27253-31-2	Neodecanoic Acid,, cobalt salt
71-36-3	butan-1-ol
95-63-6	1,2,4-trimethylbenzene
1330-20-7	xylene
98-82-8	cumene
100-41-4	ethylbenzene

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed.

· **Proposition 65:**

· **Chemicals known to cause cancer:**

13463-67-7	titanium dioxide
14808-60-7	Quartz (SiO2)
98-82-8	cumene
100-41-4	ethylbenzene

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Carcinogenic categories:**

· **EPA (Environmental Protection Agency)**

111-76-2	2-butoxyethanol	NL
71-36-3	butan-1-ol	D

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Product Name: DTM W/R Alkyd Enamel

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1330-20-7	xylene	I
98-82-8	cumene	D, CBD
100-41-4	ethylbenzene	D

· **TLV (Threshold Limit Value established by ACGIH)**		
111-76-2	2-butoxyethanol	A3
13463-67-7	titanium dioxide	A4
107-21-1	ethanediol	A4
14808-60-7	Quartz (SiO2)	A2
1330-20-7	xylene	A4
100-41-4	ethylbenzene	A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**	
13463-67-7	titanium dioxide
14808-60-7	Quartz (SiO2)

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms:**

GHS07 GHS08

· **Signal word:** Danger

· **Hazard-determining components of labeling:**
Naphtha (petroleum), hydrotreated heavy
2-butanone oxime
· **Hazard statements:**
Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.
May cause genetic defects.
May cause cancer.
· **Precautionary statements:**
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves / eye protection / face protection.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see on this label).
Wash contaminated clothing before reuse.
IF exposed or concerned: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
If on skin: Wash with plenty of water.
Take off contaminated clothing and wash it before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

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· **National regulations:**

· **Information about limitation of use:**
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.
Exceptions can be made by the authorities in certain cases.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Laboratory
· **Contact:** Laboratory Manager
· **Date of preparation / last revision:** 09/01/2016 / -
· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Muta. 1B: Germ cell mutagenicity, Hazard Category 1B
Carc. 1B: Carcinogenicity, Hazard Category 1B

Safety Data Sheet

STANTEST 2.8 ALKYD ENAMEL
1500-087 NEUTRAL BASE

JONES-BLAIR
A part of HEMPEL

Conforms to ANSI Z400.1-2010 Standard - HCS 2012

Protective Clothing	General Hazard	DOT
		

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name :	STANTEST 2.8 ALKYD ENAMEL NEUTRAL BASE
Product identity :	523JB89930, 1500-087
Product type :	alkyd paint

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

Field of application :	buildings and metal industry.
Identified uses :	Industrial/Professional use
TSCA :	**Unless otherwise stated. All components are listed or exempted.**

1.3 Details of the supplier of the safety data sheet

Company details :	HEMPEL (USA), Inc. 2728 Empire Central Dallas, TX 75235 Phone number: 1-214-353-1600 E-mail: hempel@hempel.com

1.4 Emergency telephone number (with hours of operation)

For Transportation Emergencies : (24 hours)	CHEMTREC: **1-800-424-9300** (Toll-free in the U.S., Canada and the U.S. Virgin Islands) **703-527-3887** For calls originating elsewhere (Collect calls are accepted). Contract number: CCN10384 To preserve the effectiveness of arrangements for providing accurate and timely emergency response information, the basic identifying information (shipper name or contract number) must be included on shipping papers. If the purchaser of this product is going to be shipping this product to other locations, the purchaser must arrange for its own Emergency Information Provider to respond to transport incidents. Hempel's 24 hour response contract does not cover non-Hempel shipments.
For all other information : (8 AM - 5 PM CST)	In USA toll free calling available: 1-800- 678-6641 or (936)-523-6000 See Section 4 of the safety data sheet (first aid measures).

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status :	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
GHS Classification :	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1 CARCINOGENICITY - Category 2 TOXIC TO REPRODUCTION - Category 1B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

2.2 Label elements

SECTION 2: Hazards identification

Hazard pictograms :

Signal word : Danger

Hazard statements :
H225 - Highly flammable liquid and vapor.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H351 - Suspected of causing cancer.
H360 - May damage fertility or the unborn child.

Precautionary statements :

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating or lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

Response : IF exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

Storage : Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements : Avoid contact with skin and clothing. Wash thoroughly after handling.

2.3 Other hazards

Hazards not otherwise classified : Prolonged or repeated contact may dry skin and cause irritation.

SECTION 3: Composition/information on ingredients

Product definition : Mixture

Physical state : Liquid.

Product/ingredient name	Identifiers	%	GHS Classification
tert-butyl acetate	540-88-5	≥25 - ≤50	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (inhalation) - Category 4 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
barium sulphate	7727-43-7	≥10 - ≤25	Not classified.
4-chloro-trifluorotoluene	98-56-6	≥5 - ≤10	FLAMMABLE LIQUIDS - Category 3 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
2-butoxyethanol	111-76-2	≥3 - ≤5	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A
2-methoxy-1-methylethyl acetate	108-65-6	≥1 - ≤3	FLAMMABLE LIQUIDS - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)

SECTION 3: Composition/information on ingredients

Solvent naphtha (petroleum), light arom.	64742-95-6	≥1 - ≤3	(Narcotic effects) - Category 3 FLAMMABLE LIQUIDS - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1
n-butyl acetate	123-86-4	≥1 - ≤3	FLAMMABLE LIQUIDS - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
1,2,4-trimethylbenzene	95-63-6	≥1 - ≤2	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
4-morpholinecarbaldehyde	4394-85-8	≤1	SKIN SENSITIZATION - Category 1
4-methylpentan-2-one	108-10-1	≤0.3	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
zirconium octoate	22464-99-9	≤0.3	TOXIC TO REPRODUCTION - Category 2
ethylbenzene	100-41-4	≤0.3	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (inhalation) - Category 4 CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1
cobalt bis(2-ethylhexanoate)	136-52-7	≤0.3	EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1A TOXIC TO REPRODUCTION - Category 1B

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Occupational exposure limits, if available, are listed in Section 8.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

SECTION 4: First aid measures

4.1 Description of first aid measures

General : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 911 and give immediate treatment (first aid).

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. In all cases of doubt, or when symptoms persist, seek medical attention.

Inhalation : Remove to fresh air. Keep person warm and at rest. If unconscious, place in recovery position and seek medical advice.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting unless directed to do so by medical personnel. Lower the head so that vomit will not re-enter the mouth and throat.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

SECTION 4: First aid measures

Eye contact :	Causes serious eye irritation.
Inhalation :	Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
Skin contact :	Causes skin irritation. May cause an allergic skin reaction.
Ingestion :	Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

Eye contact :	Adverse symptoms may include the following: pain or irritation watering redness
Inhalation :	Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Skin contact :	Adverse symptoms may include the following: irritation redness
Ingestion :	No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician :	Not applicable.
Specific treatments :	No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Extinguishing media :	Recommended: alcohol resistant foam, CO_2, powders, water spray. Not to be used: waterjet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture :	Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous combustion products :	Decomposition products may include the following materials: carbon oxides sulfur oxides halogenated compounds carbonyl halides metal oxide/oxides

5.3 Advice for firefighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Exclude sources of ignition and be aware of explosion hazard. Ventilate the area. Avoid breathing vapor or mist. Refer to protective measures listed in sections 7 and 8. No action shall be taken involving any personal risk or without suitable training. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.2 Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material.

6.3 Methods and materials for containment and cleaning up

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Use spark-proof tools and explosion-proof equipment. Contaminated absorbent material may pose the same hazard as the spilled product.

6.4 Reference to other sections

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits. In addition, the product should be used only in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. To dissipate static electricity during transfer, ground drum and connect to receiving container with bonding strap. No sparking tools should be used.
Avoid inhalation of vapour, dust and spray mist. Avoid contact with skin and eyes. Eating, drinking and smoking should be prohibited in area where this material is handled, stored and processed. Appropriate personal protective equipment: see Section 8. Always keep in containers made from the same material as the original one.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a cool, well-ventilated area away from incompatible materials and ignition sources. Keep out of the reach of children. Keep away from: Oxidizing agents, strong alkalis, strong acids. No smoking. Prevent unauthorized access. Containers that are opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)

See separate Product Data Sheet for recommendations or industrial sector specific solutions.
This product may be applied using several application techniques and methods of handling may be different for each. Application techniques include [but are not limited to] brushing, rolling, and spray application [conventional, HPLV, airless, pleural component or aerosol can]. Avoid the breathing of vapors and, if spraying, do not breath spray mist or aerosols.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Product/ingredient name	Exposure limit values
tert-butyl acetate	**NIOSH REL (United States, 10/2016).** TWA: 950 mg/m³ 10 hours. TWA: 200 ppm 10 hours. **OSHA PEL (United States, 5/2018).** TWA: 950 mg/m³ 8 hours. TWA: 200 ppm 8 hours. **ACGIH TLV (United States, 3/2020).** STEL: 150 ppm 15 minutes. TWA: 50 ppm 8 hours.
barium sulphate	**ACGIH TLV (United States, 3/2020).**

SECTION 8: Exposure controls/personal protection

	TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction **NIOSH REL (United States, 10/2016).** TWA: 5 mg/m³ 10 hours. Form: Respirable fraction TWA: 10 mg/m³ 10 hours. Form: Total **OSHA PEL (United States, 5/2018).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust
2-butoxyethanol	**ACGIH TLV (United States, 3/2020).** TWA: 20 ppm 8 hours. **NIOSH REL (United States, 10/2016). Absorbed through skin.** TWA: 5 ppm 10 hours. TWA: 24 mg/m³ 10 hours. **OSHA PEL (United States, 5/2018). Absorbed through skin.** TWA: 50 ppm 8 hours. TWA: 240 mg/m³ 8 hours.
2-methoxy-1-methylethyl acetate	**AIHA WEEL (United States, 7/2020).** TWA: 50 ppm 8 hours.
Solvent naphtha (petroleum), light arom.	**ACGIH TLV (United States).** TWA Tentative: 25 ppm 8 hours.
n-butyl acetate	**NIOSH REL (United States, 10/2016).** TWA: 150 ppm 10 hours. TWA: 710 mg/m³ 10 hours. STEL: 200 ppm 15 minutes. STEL: 950 mg/m³ 15 minutes. **OSHA PEL (United States, 5/2018).** TWA: 150 ppm 8 hours. TWA: 710 mg/m³ 8 hours. **ACGIH TLV (United States, 3/2020).** STEL: 150 ppm 15 minutes. TWA: 50 ppm 8 hours.
1,2,4-trimethylbenzene	**ACGIH TLV (United States, 3/2020).** TWA: 123 mg/m³ 8 hours. TWA: 25 ppm 8 hours. **NIOSH REL (United States, 10/2016).** TWA: 125 mg/m³ 10 hours. TWA: 25 ppm 10 hours.
4-methylpentan-2-one	**ACGIH TLV (United States, 3/2020).** TWA: 20 ppm 8 hours. STEL: 75 ppm 15 minutes. **NIOSH REL (United States, 10/2016).** TWA: 50 ppm 10 hours. TWA: 205 mg/m³ 10 hours. STEL: 75 ppm 15 minutes. STEL: 300 mg/m³ 15 minutes. **OSHA PEL (United States, 5/2018).** TWA: 100 ppm 8 hours. TWA: 410 mg/m³ 8 hours.
zirconium octoate	**ACGIH TLV (United States, 3/2020).** TWA: 5 mg/m³, (as Zr) 8 hours. STEL: 10 mg/m³, (as Zr) 15 minutes. **NIOSH REL (United States, 10/2016).** TWA: 5 mg/m³, (as Zr) 10 hours. STEL: 10 mg/m³, (as Zr) 15 minutes. **OSHA PEL (United States, 5/2018).** TWA: 5 mg/m³, (as Zr) 8 hours.
ethylbenzene	**ACGIH TLV (United States, 3/2020).** TWA: 20 ppm 8 hours. **NIOSH REL (United States, 10/2016).** STEL: 545 mg/m³ 15 minutes. STEL: 125 ppm 15 minutes. TWA: 435 mg/m³ 10 hours. TWA: 100 ppm 10 hours. **OSHA PEL (United States, 5/2018).** TWA: 435 mg/m³ 8 hours. TWA: 100 ppm 8 hours.
cobalt bis(2-ethylhexanoate)	**ACGIH TLV (United States, 3/2020). Skin sensitizer. Inhalation sensitizer.** TWA: 0.02 mg/m³, (as Co) 8 hours.

SECTION 8: Exposure controls/personal protection

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

8.2 Exposure controls

Appropriate engineering controls

Provide local exhaust and general ventilation systems to maintain airborne concentrations below OSHA, ACGIH, and manufacturer recommended exposure limits. Local exhaust ventilation is preferred because it prevents contaminant dispersion into work areas by controlling it at its source. Use local and general exhaust ventilation to effectively remove and prevent buildup of mists/vapors/fumes generated from the handling of this product.
Note: Local exhaust ventilation is designed to capture an emitted contaminant at or near its source, before the contaminant has a chance to disperse into the workplace air. General exhaust ventilation, also called dilution ventilation, is different from local exhaust ventilation because instead of capturing emissions at their source and removing them from the air, general exhaust ventilation allows the contaminant to be emitted into the workplace air and then dilutes the concentration of the contaminant to an acceptable level (e.g., to the PEL or below).

Individual protection measures

General :	Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. Safety eyewear should be used when there is a likelihood of exposure.
Hygiene measures :	Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.
Eye/face protection :	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
Hand protection :	Wear chemical-resistant gloves in combination with 'basic' employee training. The quality of the chemical-resistant protective gloves must be chosen as a function of the specific workplace concentrations and quantity of hazardous substances. Since the actual work situation is unknown. Supplier of gloves should be contacted in order to find the appropriate type. Below listed glove(s) should be regarded as generic advice: Recommended: Silver Shield / Barrier / 4H gloves, polyvinyl alcohol (PVA), Viton® May be used: nitrile rubber, neoprene rubber, butyl rubber Short term exposure: natural rubber (latex), polyvinyl chloride (PVC)
Body protection :	Personal protective equipment for the body should be selected based on the task being performed and the risks involved handling this product. Wear suitable protective clothing. Always wear protective clothing when spraying.
Respiratory protection :	If working areas have insufficient ventilation, wear half or totally covering mask equipped with gas filter of type Organic Vapor, when grinding use particle filter of type P95, P99 or P100. When spraying use a combined filter (organic vapor / HEPA or organic vapor / P100 type). Be sure to use approved/certified respirator or equivalent. Always wear an air-fed respirator when spraying in a continuous and prolonged work situation (e.g. hood with supply of fresh or compressed air or a full face, powered air purifying filter).
Protective clothing (pictograms) :	 Note: Application of paint products by spraying requires additional safety precautions: Full body suit, Full face respirator with air supplied.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state :	Liquid.
Color :	Various
Odor :	Solvent-like
pH :	Testing not relevant or not possible due to nature of the product.
Melting point/freezing point :	Testing not relevant or not possible due to nature of the product.
Boiling point/boiling range :	Testing not relevant or not possible due to nature of the product.
Flash point :	Closed cup: 7°C (44.6°F)
Evaporation rate :	Testing not relevant or not possible due to nature of the product.
Flammability :	Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge, heat and oxidizing materials. Slightly flammable in the presence of the following materials or conditions: reducing materials.
Upper/lower flammability or explosive limits :	0.9 - 12.7 vol %
Vapor pressure :	Testing not relevant or not possible due to nature of the product.
Vapor density :	Testing not relevant or not possible due to nature of the product.
Relative density :	1.177 g/cm³
Solubility(ies) :	Easily soluble in the following materials: cold water and hot water.
Partition coefficient (LogKow) :	Testing not relevant or not possible due to nature of the product.
Auto-ignition temperature :	Testing not relevant or not possible due to nature of the product.
Decomposition temperature :	Testing not relevant or not possible due to nature of the product.
Viscosity :	Testing not relevant or not possible due to nature of the product.
Explosive properties :	Slightly explosive in the presence of the following materials or conditions: open flames, sparks and static discharge.
Oxidizing properties :	Testing not relevant or not possible due to nature of the product.

9.2 Other information

Solvent(s) % by weight (Included excempt solvent(s)):	49.2 % (w/w)
Water % by weight :	Weighted average: 0 %
VOC content (Coatings) :	1.5 lbs/gal (180.1 g/l)
VOC content (Regulatory) :	2.67 lbs/gal (319.6 g/l)
TOC Content (Volatile) :	Weighted average: 350 g/l
Solvent Gas :	Weighted average: 0.114 m³/l

SECTION 10: Stability and reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

The product is stable.

10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid

Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

SECTION 10: Stability and reactivity

10.5 Incompatible materials

Highly reactive or incompatible with the following materials: oxidizing materials.
Reactive or incompatible with the following materials: reducing materials.

10.6 Hazardous decomposition products

When exposed to high temperatures (i.e. in case of fire) harmful decomposition products may be formed:

Decomposition products may include the following materials: carbon oxides sulfur oxides halogenated compounds carbonyl halides metal oxide/oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Exposure to component solvent vapor concentrations may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Solvents may cause some of the above effects by absorption through the skin. Symptoms and signs include headaches, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage. Accidental swallowing may cause stomach pain. Chemical lung inflammation may occur if the product is taken into the lungs via vomiting.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
tert-butyl acetate	LC50 Inhalation Vapor	Rat	12.52 mg/l	4 hours
	LD50 Oral	Rat	4100 mg/kg	-
barium sulphate	LD50 Oral	Rat	>15000 mg/kg	-
4-chloro-trifluorotoluene	LC50 Inhalation Vapor	Rat	33 mg/l	4 hours
	LD50 Dermal	Rat	>3300 mg/kg	-
	LD50 Oral	Rat	13000 mg/kg	-
2-butoxyethanol	LC50 Inhalation Dusts and mists	Rat	2.2 mg/l	4 hours
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	530 mg/kg	-
2-methoxy-1-methylethyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	8532 mg/kg	-
Solvent naphtha (petroleum), light arom.	LC50 Inhalation Vapor	Rat	6193 mg/m³	4 hours
	LD50 Dermal	Rabbit	3160 mg/kg	-
	LD50 Oral	Rat	3492 mg/kg	-
n-butyl acetate	LC50 Inhalation Vapor	Rat	>21 mg/l	4 hours
	LD50 Dermal	Rabbit	>14112 mg/kg	-
	LD50 Oral	Rat	10768 mg/kg	-
1,2,4-trimethylbenzene	LC50 Inhalation Vapor	Rat	18000 mg/m³	4 hours
	LD50 Oral	Rat	5 g/kg	-
4-methylpentan-2-one	LD Dermal	Rabbit	>3 g/kg	-
zirconium octoate	LC50 Inhalation Dusts and mists	Rat	>8800 mg/m³	1 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-
ethylbenzene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
cobalt bis(2-ethylhexanoate)	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	3129 mg/kg	-

Acute toxicity estimates

Route	ATE value
Oral	14647.32 mg/kg
Dermal	30400.09 mg/kg
Inhalation (gases)	415819.65 ppm
Inhalation (vapors)	37.67 mg/l
Inhalation (dusts and mists)	60.8 mg/l

Irritation/Corrosion

SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Score	Exposure
tert-butyl acetate	Eyes - Mild irritant	Rabbit	-	100 microliters
	Skin - Mild irritant	Rabbit	-	24 hours 500 microliters
barium sulphate	Eyes - Mild irritant	Rabbit	-	-
4-chloro-trifluorotoluene	Skin - Irritant	Rabbit	-	-
	Eyes - Irritant	Rabbit	-	-
2-butoxyethanol	Eyes - Moderate irritant	Rabbit	-	-
	Skin - Mild irritant	Rabbit	-	-
2-methoxy-1-methylethyl acetate	Respiratory - Mild irritant	Rabbit	-	-
	Eyes - Mild irritant	Rabbit	-	-
Solvent naphtha (petroleum), light arom.	Eyes - Mild irritant	Rabbit	-	24 hours 100 microliters
	Respiratory - Mild irritant	Rabbit	-	-
	Skin - Moderate irritant	Rabbit	-	-
n-butyl acetate	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams
	Eyes - Mild irritant	Rabbit	-	-
	Respiratory - Mild irritant	Rabbit	-	-
4-morpholinecarbaldehyde	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams
4-methylpentan-2-one	Eyes - Moderate irritant	Rabbit	-	24 hours 100 microliters
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams
ethylbenzene	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams
	Respiratory - Mild irritant	Rabbit	-	-
	Eyes - Mild irritant	Rabbit	-	-

Sensitizer

Product/ingredient name	Route of exposure	Species	Result
4-chloro-trifluorotoluene	skin	Mouse	Sensitizing
cobalt bis(2-ethylhexanoate)	skin	Mouse	Sensitizing

Carcinogen Classification

Product/ingredient name	IARC	NTP	OSHA
2-butoxyethanol	3	-	-
4-methylpentan-2-one	2B	-	-
ethylbenzene	2B	-	-
cobalt bis(2-ethylhexanoate)	2B	Reasonably anticipated to be a human carcinogen.	-

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
tert-butyl acetate	Category 3		Respiratory tract irritation
	Category 3		Narcotic effects
4-chloro-trifluorotoluene	Category 3		Respiratory tract irritation
2-methoxy-1-methylethyl acetate	Category 3		Narcotic effects
Solvent naphtha (petroleum), light arom.	Category 3		Respiratory tract irritation
	Category 3		Narcotic effects
n-butyl acetate	Category 3		Narcotic effects
1,2,4-trimethylbenzene	Category 3		Respiratory tract irritation
4-methylpentan-2-one	Category 3		Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
ethylbenzene	Category 2	-	hearing organs

Aspiration hazard

SECTION 11: Toxicological information

Product/ingredient name	Result
Solvent naphtha (petroleum), light arom. ethylbenzene	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential chronic health effects

Sensitization : Contains 4-morpholinecarbaldehyde, cobalt bis(2-ethylhexanoate). May produce an allergic reaction.

Other information : No additional known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Do not allow to enter drains or watercourses. Harmful to aquatic life with long lasting effects.

When spilled, this product may act as an oil, causing a film, sheen, emulsion, or sludge at or beneath the surface of a body of water. Oils of any kind can cause: (a) drowning of waterfowl due to lack of buoyancy, loss of insulating capacity of feathers, starvation and vulnerability to predators due to lack of mobility; (b) lethal effect on fish by coating gill surfaces, preventing respiration; (c) potential fish kills resulting from alteration in biochemical oxygen demand; (d) asphyxiation of benthic life forms when floating masses become engaged with surface debris and settle on the bottom; and (e) adverse aesthetic effects of fouled shoreline and beaches.

Product/ingredient name	Result	Species	Exposure
4-chloro-trifluorotoluene	Acute IC50 2 mg/l	Daphnia	48 hours
	Acute LC50 3 mg/l	Fish	96 hours
2-butoxyethanol	Acute EC50 911 mg/l	Algae	72 hours
	Acute EC50 1550 mg/l	Daphnia	48 hours
	Acute LC50 1474 mg/l	Fish	96 hours
2-methoxy-1-methylethyl acetate	Acute LC50 100 - 180 mg/l	Fish	96 hours
Solvent naphtha (petroleum), light arom.	Acute EC50 2.6 mg/l	Algae - Pseudokirchneriella subcapitata (green algae)	96 hours
	Acute EC50 3.2 mg/l	Daphnia	48 hours
	Acute LC50 9.22 mg/l	Fish - Oncorhynchus mykiss (rainbow trout)	96 hours
n-butyl acetate	Acute EC50 648 mg/l	Algae	72 hours
	Acute EC50 44 mg/l	Daphnia	48 hours
1,2,4-trimethylbenzene	Acute LC50 4910 µg/l Marine water	Crustaceans - Elasmopus pectinicrus - Adult	48 hours
	Acute LC50 7720 µg/l Fresh water	Fish - Pimephales promelas	96 hours
4-methylpentan-2-one	Chronic NOEC 7800 - 39000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 168 mg/l Fresh water	Fish - Pimephales promelas - Embryo	33 days
ethylbenzene	Chronic NOEC <1000 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
cobalt bis(2-ethylhexanoate)	Acute LC50 0.1 - 1 mg/l	Fish	96 hours

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
tert-butyl acetate	-	50 % - Inherent - 28 days	-	-
4-chloro-trifluorotoluene	OECD 301D 301D Ready Biodegradability - Closed Bottle Test	19.2 % - Not readily - 28 days	-	-
2-butoxyethanol	-	90 % - Readily - 28 days	-	-
	-	32 % - 5 days	756 mg/kg BOD_5	-
	-	32 % - 28 days	2379000 mg/kg COD	-
2-methoxy-1-methylethyl acetate	OECD 301F Ready Biodegradability - Manometric Respirometry Test	90 % - Readily - 28 days	-	-
	OECD 301F Ready Biodegradability - Manometric Respirometry Test	83 % - Readily - 28 days	-	-
Solvent naphtha (petroleum), light arom.	OECD 301F Ready Biodegradability -	78 % - Readily - 28 days	-	-

SECTION 12: Ecological information

	Manometric Respirometry Test			
	-	>70 % - Readily - 28 days	-	-
	-	>60 % - Readily - 28 days	-	-
n-butyl acetate	-	90 % - Readily - 28 days	-	-
	OECD 301D Ready Biodegradability - Closed Bottle Test	80 % - Readily - 5 days	-	-
4-methylpentan-2-one	-	84 % - 14 days	100 mg/l	-
zirconium octoate	-	99 % - Readily - 28 days	20 mg/l	-
ethylbenzene	-	>70 % - Readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
tert-butyl acetate	-	-	Inherent
4-chloro-trifluorotoluene	-	-	Not readily
2-butoxyethanol	-	-	Readily
2-methoxy-1-methylethyl acetate	-	-	Readily
Solvent naphtha (petroleum), light arom.	-	-	Readily
n-butyl acetate	-	-	Readily
4-methylpentan-2-one	-	-	Readily
zirconium octoate	-	-	Readily
ethylbenzene	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
tert-butyl acetate	1.64	-	low
4-chloro-trifluorotoluene	3.7	-	low
2-butoxyethanol	0.81	-	low
2-methoxy-1-methylethyl acetate	1.2	-	low
Solvent naphtha (petroleum), light arom.	-	10 - 2500	high
n-butyl acetate	2.3	3.1	low
1,2,4-trimethylbenzene	3.63	243	low
4-morpholinecarbaldehyde	-	<1.9	low
4-methylpentan-2-one	1.31	2	low
zirconium octoate	-	2.96	low
ethylbenzene	3.6	-	low
cobalt bis(2-ethylhexanoate)	-	15600	high

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) : No known data avaliable in our database.

Mobility : No known data avaliable in our database.

12.5 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.
The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.
Refer to Section 7 and Section 8 for additional handling information and protection of employees.

SECTION 13: Disposal considerations

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

Transport may take place according to national regulation or DOT for transport by road and by train, IMDG for transport by sea, IATA for Air shipment. Refer to specific Dangerous Goods Transport requirements under 49CFR, ICAO and IATA.

	14.1 UN no.	14.2 Proper shipping name	14.3 Transport hazard class(es)	14.4 PG*	14.5 Env*	Additional information
DOT Code	UN1263	PAINT	3 - 	II	No.	**Reportable quantity** (xylene, tert-butyl acetate) 14632.8 lbs / 6643.3 kg [1491.1 gal / 5644.3 L] Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
TDG Code	UN1263	PAINT	3 - 	II	No.	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3).
SCT Code	UN1263	PAINT	3 - 	II	No.	-
IMDG Code	UN1263	PAINT	3 - 	II	No.	**Emergency schedules** F-E, S-E
IATA Code	UN1263	PAINT	3 - 	II	No.	-

Code : Classification
PG* : Packing group
Env.* : Environmental hazards

14.6 Special precautions for user

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to IMO instruments

Not applicable.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Federal regulations : All components are active or exempted.

SECTION 15: Regulatory information

TSCA 4(a) final test rules: nonane; octamethylcyclotetrasiloxane (D4)
TSCA 8(a) PAIR: tert-butyl acetate; 4-chloro-trifluorotoluene; 2-methoxy-1-methylethyl acetate; 2-methylpropan-2-ol; 2,4,4-trimethylpent-1-ene; nonane; octamethylcyclotetrasiloxane (D4); decamethylcyclopentasiloxane (D5); dipropylene glycol methyl ether; Dodecamethylcyclohexasiloxane (D6)
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
United States inventory (TSCA 8b): All components are active or exempted.

Clean Water Act (CWA) 307: ethylbenzene; zinc bis(2-ethylhexanoate); zinc oxide; toluene; benzene

Clean Water Act (CWA) 311: tert-butyl acetate; n-butyl acetate; xylene; ethylbenzene; toluene; benzene

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Listed

Product/ingredient name	CAS number	Concentration
xylene	1330-20-7	0.6834
4-methylpentan-2-one	108-10-1	0.21995
ethylbenzene	100-41-4	0.16644
cobalt bis(2-ethylhexanoate)	136-52-7	0.10205
2-(2-butoxyethoxy)ethanol	112-34-5	0.088197
cumene	98-82-8	0.036148
2-(2-butoxyethoxy)ethanol	112-34-5	0.0078398
toluene	108-88-3	0.0063787
benzene	71-43-2	0.0042463

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 311/312 Classification :

FLAMMABLE LIQUIDS - Category 2
SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 2
TOXIC TO REPRODUCTION - Category 1B
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
HNOC - Defatting irritant

Product/ingredient name	%	Classification
tert-butyl acetate	≥25 - ≤50	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (inhalation) - Category 4 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 HNOC - Defatting irritant
4-chloro-trifluorotoluene	≥5 - ≤10	FLAMMABLE LIQUIDS - Category 3 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Formaldehyde, polymer with cyclohexanone	≥3 - ≤5	COMBUSTIBLE DUSTS
2-butoxyethanol	≥3 - ≤5	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A
2-methoxy-1-methylethyl acetate	≥1 - ≤3	FLAMMABLE LIQUIDS - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
Solvent naphtha (petroleum), light arom.	≥1 - ≤3	FLAMMABLE LIQUIDS - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1
n-butyl acetate	≥1 - ≤3	FLAMMABLE LIQUIDS - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
1,2,4-trimethylbenzene	≥1 - ≤2	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
4-morpholinecarbaldehyde	≤1	SKIN SENSITIZATION - Category 1

SECTION 15: Regulatory information

4-methylpentan-2-one	≤0.3	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 HNOC - Defatting irritant
zirconium octoate	≤0.3	TOXIC TO REPRODUCTION - Category 2
ethylbenzene	≤0.3	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (inhalation) - Category 4 CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1
cobalt bis(2-ethylhexanoate)	≤0.3	EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1A TOXIC TO REPRODUCTION - Category 1B

SARA 313 :

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

Form R - Reporting requirements :

Product/ingredient name	CAS number	Concentration
2-butoxyethanol	111-76-2	3 - 5
1,2,4-trimethylbenzene	95-63-6	1 - 3
ethylbenzene	100-41-4	0 - 1
cobalt bis(2-ethylhexanoate)	136-52-7	0 - 1

Supplier notification :

Product/ingredient name	CAS number	Concentration
2-butoxyethanol	111-76-2	3 - 5
1,2,4-trimethylbenzene	95-63-6	1 - 3
ethylbenzene	100-41-4	0 - 1
cobalt bis(2-ethylhexanoate)	136-52-7	0 - 1

State regulations :

Connecticut Carcinogen Reporting: None of the components are listed.
Connecticut Hazardous Material Survey: None of the components are listed.
Florida substances: None of the components are listed.
Illinois Chemical Safety Act: None of the components are listed.
Illinois Toxic Substances Disclosure to Employee Act: None of the components are listed.
Louisiana Reporting: None of the components are listed.
Louisiana Spill: None of the components are listed.
Massachusetts Substances: The following components are listed: TERT-BUTYL ACETATE; BARIUM SULFATE; 2-BUTOXYETHANOL; ETHYLENE GLYCOL MONOBUTYL ETHER; BUTYL CELLOSOLVE; BUTYL ACETATE; N-BUTYL ACETATE; PSEUDOCUMENE
Massachusetts Spill: None of the components are listed.
Michigan Critical Material: None of the components are listed.
Minnesota Hazardous Substances: None of the components are listed.
New Jersey Spill: None of the components are listed.
New Jersey Toxic Catastrophe Prevention Act: None of the components are listed.
New Jersey Hazardous Substances: The following components are listed: tert-BUTYL ACETATE; ACETIC ACID, 1,1-DIMETHYLETHYL ESTER; BARIUM SULFATE; SULFURIC ACID, BARIUM SALT (1:1); 2-BUTOXY ETHANOL; ETHYLENE GLYCOL MONOBUTYL ETHER; BUTYL CELLOSOLVE; ETHANOL, 2-BUTOXY-; n-BUTYL ACETATE; ACETIC ACID, BUTYL ESTER; PSEUDOCUMENE; 1,2,4-TRIMETHYL BENZENE; BENZENE,1,2,4-TRIMETHYL-; ETHYL BENZENE; BENZENE, ETHYL-; COBALT compounds
New York Hazardous Substances: The following components are listed: tert-Butyl acetate; Butyl acetate
New York Toxic Chemical Release Reporting: None of the components are listed.
Pennsylvania RTK Hazardous Substances: The following components are listed: ACETIC ACID, 1,1-DIMETHYLETHYL ESTER; BARIUM SULFATE; ETHANOL, 2-BUTOXY-; ACETIC ACID, BUTYL ESTER; PSEUDOCUMENE
Rhode Island Hazardous Substances: None of the components are listed.

California Prop. 65 PFF :

WARNING: This product can expose you to chemicals including Methyl isobutyl ketone and Benzene, which are known to the State of California to cause cancer and birth defects or other reproductive harm. This product can expose you to chemicals including p-chloro-α,α,α-trifluorotoluene, Ethylbenzene, Cumene and Silica, crystalline, which are known to the State of California to cause cancer, and Toluene, 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.

SECTION 15: Regulatory information

Product/ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
4-chloro-trifluorotoluene	Yes.	No.		
4-methylpentan-2-one	Yes.	Yes.		
ethylbenzene	Yes.	No.	Yes.	
cumene	Yes.	No.		
toluene	No.	Yes.		Yes.
benzene	Yes.	Yes.	Yes.	Yes.
respirable quartz	Yes.	No.		

SECTION 16: Other information

Remarks : Note: In USA, consult Code of Federal Regulations, Title 29, Labor, Parts 1910 and 1915 concerning occupational safety and health standards and regulations, as well as any other applicable Federal, State or local regulations that apply to safe practices in coating operations.
Warning! If you scrape, sand, or remove old paint, you may release lead dust. LEAD is TOXIC.

Validation : Validated by US - HSE Products Coordinator on 14 July 2021

GHS Classification

Procedure used to derive the classification.

Classification	Justification
FLAMMABLE LIQUIDS - Category 2	On basis of test data
SKIN IRRITATION - Category 2	Calculation method
EYE IRRITATION - Category 2A	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
CARCINOGENICITY - Category 2	Calculation method
TOXIC TO REPRODUCTION - Category 1B	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method

Hazardous Material Information System (U.S.A.)

National Fire Protection Association (U.S.A.)

Personal Protective Equipment (PPE) shown in this section is a suggestion. Since conditions vary from one work location to another consult the facility safety & health program. Customer or end user is responsible to evaluate worker exposure conditions at the site of application and determine the appropriate PPE suitable for workers at that particular facility or location.

Abbreviations and acronyms :

ANSI = American National Standards Institute
HCS = Hazardous Communication System
TSCA = Toxic Substances Control Act
CFR = Code of federal Regulations
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
OSHA = United States Occupational Health and Safety Administration
NIOSH = National Institute for Occupational Safety and Health
ACGIH = American Conference of Industrial Hygienists
IARC = International Agency for Research on Cancer.
NTP = National Toxicology Program
ATE = Acute Toxicity Estimate

OECD = Organisation for Economic Co-operation and Development
BCF = Bioconcentration Factor
DOT = United States Department of Transportation
ERG = Emergency Response Guide
TDG = Transport of Dangerous Goods, Canada
SCT = Transportation & Communications Ministry, Mexico
IMDG = International Maritime Dangerous Goods
IATA = International Air Transport Association
SARA = Superfund Amendments Reauthorization Act
EPCRA = Emergency Planning and Community Right to Know Act

Notice to reader

Indicates information that has changed from previously issued version.

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SAFETY DATA SHEET

1. Identification

Product identifier	**Acetone**
Other means of identification	
Product code	0120001
Manufacturer information	Superior Industrial Solutions, Inc. 1402 North Capitol Avenue, Suite #100 Indianapolis, IN 46202 US General Information: (317) 781-4400 Chemical Emergency: (317) 781-4470 Website: www.relyonsuperior.com SDS Request: SDSInfo@relyonsuperior.com
Recommended use	Solvent
Recommended restrictions	None known.

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 2
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	

Label elements

Signal word Danger

Hazard statement

H225	Highly flammable liquid and vapor.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

Precautionary statement

Prevention

P262	Do not get in eyes, on skin, or on clothing.
P261	Avoid breathing vapors or mist.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/eye protection/face protection.

Response

P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P311	Call a POISON CENTER or doctor/physician.
P303 + P361 + P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P304 + P340	If inhaled: Remove person to fresh air and keep comfortable for breathing
P312	Call a poison center/doctor if you feel unwell.
P305 + P351 + P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P370 + P378	In case of fire: Use appropriate media to extinguish.

Storage

P235	Keep cool.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.

Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
2-Propanone		67-64-1	100

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritatior 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	Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.
Most important symptoms/effects, acute and delayed	May cause drowsiness or 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.
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 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. Dry chemical powder. Carbon dioxide (CO2).
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. 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. Avoid breathing mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. 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. This product is miscible in water.

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.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. 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 taste or swallow. Avoid breathing mist/vapors. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in 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).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit At this time, the other constituents have no known exposure limits.

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

Material	Type	Value
Acetone	PEL	2400 mg/m3
		1000 ppm

Components	Type	Value
2-Propanone (CAS 67-64-1)	PEL	2400 mg/m3
		1000 ppm

US. ACGIH Threshold Limit Values

Material	Type	Value
Acetone	STEL	500 ppm
	TWA	250 ppm

Components	Type	Value
2-Propanone (CAS 67-64-1)	STEL	500 ppm
	TWA	250 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Material	Type	Value
Acetone	TWA	590 mg/m3
		250 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
2-Propanone (CAS 67-64-1)	TWA	590 mg/m3
		250 ppm

Biological limit values

ACGIH Biological Exposure Indices

Material	Value	Determinant	Specimen	Sampling Time
2-Propanone (CAS 67-64-1)	25 mg/l	Acetone	Urine	*

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

Appropriate engineering controls Explosion-proof general and local exhaust ventilation. Good general ventilation 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 and safety shower.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Face shield is recommended, if splashing is possible.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Chemical respirator with organic vapor cartridge.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using do not smoke. Keep away from food and drink. 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 Clear.

Physical state Liquid.

Color Colorless.

Odor Pungent.

pH Not available.

Melting point/freezing point Not determined

Initial boiling point and boiling range 132.8 °F (56 °C) estimated

Flash point -4.0 °F (-20.0 °C) Pensky-Martens Closed Cup

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 2.5 % estimated

Flammability limit - upper (%) 12.8 % estimated

Vapor pressure 181 mm Hg at 20°C

Vapor density > 1 (Air = 1)

Solubility(ies)

Solubility (water) Soluble

Auto-ignition temperature	Not determined
Other information	
Pounds per gallon	6.6331 lb/gal
Specific gravity	0.796

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. Stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Suitable precautions should be utilized if using this product at temperatures above the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause drowsiness or dizziness. Headache. Nausea, vomiting. May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Harmful if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics	May cause drowsiness or 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 In high concentrations, vapors are anesthetic and may cause headache, fatigue, dizziness and central nervous system effects. Harmful if swallowed.

Components	Species	Test Results
2-Propanone (CAS 67-64-1)		
Acute		
Dermal		
LD50	Rabbit	20000 mg/kg
Inhalation		
LC50	Rat	50.1 mg/l, 8 Hours

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

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects

Specific target organ toxicity	May cause respiratory irritation. May cause drowsiness or dizziness.
- single exposure	
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	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-Propanone (CAS 67-64-1)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	10294 - 17704 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	4740 - 6330 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

2-Propanone	-0.24

Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. 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 NON-BULK / BULK:

UN number	UN1090
Proper shipping name	Acetone
Hazard class	3
Packing group	II
Reportable quantity	5000
ERG code	127

15. Regulatory information

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

Toxic Substances Control Act (TSCA) Restrictions of Use

None known

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

2-Propanone (CAS 67-64-1) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

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
Specific target organ toxicity (single or repeated exposure)

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

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

Not regulated.

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

Not regulated.

Safe Drinking Water Act (SDWA) Contains component(s) regulated under the Safe Drinking Water Act.

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

2-Propanone (CAS 67-64-1) 6532

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

2-Propanone (CAS 67-64-1) 35 %WV

DEA Exempt Chemical Mixtures Code Number

2-Propanone (CAS 67-64-1) 6532

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

2-Propanone (CAS 67-64-1) Low priority

US state regulations

California Proposition 65

WARNING: This product can expose you to chemicals including Benzene, which is known to the State of California to cause cancer and 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
Benzene (CAS 71-43-2)	Listed: February 27, 1987
Cumene (CAS 98-82-8)	Listed: April 6, 2010

California Proposition 65 - CRT: Listed date/Developmental toxin

Benzene (CAS 71-43-2)	Listed: December 26, 1997
Methanol (CAS 67-56-1)	Listed: March 16, 2012
Toluene (CAS 108-88-3)	Listed: January 1, 1991

California Proposition 65 - CRT: Listed date/Male reproductive toxin

Benzene (CAS 71-43-2) Listed: December 26, 1997

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

2-Propanone (CAS 67-64-1)

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 Chemical Substance Inventory (TCSI)	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 12-05-2014

Revision date 05-12-2021

Version # 04

Disclaimer Superior Industrial Solutions, Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's sole responsibility to determine whether the particular purpose and use of the product is proper, suitable and safe, and to ensure safe conditions for handling, storage and disposal of the product, and the user assumes all liability for loss, injury, damage or expense arising out if its use. This information is based on data available to us and is accurate to the best of our knowledge at thetime of printing. However, no representation or warranty is expressed or implied, including warranties of merchantability or fitness for a particular purpose, regarding the accuracy or completeness of the information contained herein. All materials may present known and unknownhazards and should be used with caution. Buyer assumes all risk and liabilities arising out of these hazards. Buyer accepts and uses this material on these conditions.

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

Safety Data Sheet
acc. to OSHA HCS

Printing date 01/15/2023 *Reviewed on 05/11/2022*

1 Identification

Product identifier
Trade name: AMASTEEL

Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Ervin Industries, Inc.
3893 Research Park Drive
Ann Arbor, MI 48108-2217
Phone: (734)-769-4600/Fax: (734)-663-0136
sales@ervinindustries.com
http://www.ervinindustries.com
Information department:
Quality Assurance Department
(mo-thu: 8 a.m.-4 p.m., fr: 8 a.m. - 1 p.m.)

Emergency telephone number: *Phone: (734)-769-4600/Fax: (734)-663-0136*
EUPCS: *PC-TEC-12*

2 Hazard(s) identification

Classification of the substance or mixture
The product is not classified, according to the Globally Harmonized System (GHS).

Label elements
GHS label elements *Void*
Hazard pictograms *Void*
Signal word *Void*
Hazard statements *Void*
Classification system:
NFPA ratings (scale 0 - 4)
Health = 0
Fire = 0
Reactivity = 0
HMIS-ratings (scale 0 - 4)
Health = 0
Fire = 0
Reactivity = 0
Other hazards
Results of PBT and vPvB assessment
PBT: *Not applicable.*
vPvB: *Not applicable.*

3 Composition/information on ingredients

Chemical characterization: Mixtures
Description: *Mixture: consisting of the following components.*

Dangerous components:		
7440-44-0	*carbon*	*0.80-1.20%*
7439-96-5	*manganese*	*0.35-1.20%*
7440-21-3	*silicon*	*0.40-1.50%*
7704-34-9	*sulfur*	*<0.05%*
7440-02-0	*Nickel*	*<0.2%*

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Printing date 01/15/2023 *Reviewed on 05/11/2022*

Trade name: Amasteel

(Contd. of page 1)

7723-14-0	red phosphorus	<0.05%

4 First-aid measures

Description of first aid measures
General information: *No special measures required.*
After inhalation:
Supply fresh air; consult doctor in case of complaints.
In case of unconsciousness place patient stably in side position for transportation.
After skin contact:
Rinse with warm water.
If skin irritation continues, consult a doctor.
After eye contact:
Rinse opened eye for several minutes under running water.
Consult a doctor.
After swallowing:
Rinse out mouth and then drink plenty of water.
If symptoms persist consult doctor.
Information for doctor:
Most important symptoms and effects, both acute and delayed *No further relevant information available.*
Indication of any immediate medical attention and special treatment needed
No further relevant information available.

5 Fire-fighting measures

Extinguishing media
Suitable extinguishing agents:
CO2, sand, extinguishing powder. Do not use water.
Use fire fighting measures that suit the environment.
For safety reasons unsuitable extinguishing agents: *Water*
Special hazards arising from the substance or mixture
Product is not flammable.
Fine metal dust removed as a waste stream and / or contamination during the blasting process, poses a small minor risk of causing a fire or explosion.
Advice for firefighters
Protective equipment: *No special measures required.*

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Scrap and debris can cause slip and fall hazards. It is recommended that floors and work areas be kept clean at all times.
floors and work areas clean at all times.
Environmental precautions: *No special measures required.*
Methods and material for containment and cleaning up: *Pick up mechanically.*
Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
None
None

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

(Contd. of page 2)

Protective Action Criteria for Chemicals

PAC-1:		
7439-96-5	manganese	3 mg/m³
7440-21-3	silicon	45 mg/m³
7440-44-0	carbon	6 mg/m³
7723-14-0	red phosphorus	0.27 mg/m³
7440-02-0	Nickel	6 mg/m³
PAC-2:		
7439-96-5	manganese	5 mg/m³
7440-21-3	silicon	100 mg/m³
7440-44-0	carbon	330 mg/m³
7723-14-0	red phosphorus	3 mg/m³
7440-02-0	Nickel	330 mg/m³
PAC-3:		
7439-96-5	manganese	1,800 mg/m³
7440-21-3	silicon	630 mg/m³
7440-44-0	carbon	2,000 mg/m³
7723-14-0	red phosphorus	18 mg/m³
7440-02-0	Nickel	2,000 mg/m³

7 Handling and storage

Handling:
Precautions for safe handling
Take special care to prevent the product from leaking. Exercise special care when removing the tie-down straps that are part of the bulk pallet shipments.
Information about protection against explosions and fires: *No special measures required.*

Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: *No special requirements.*
Information about storage in one common storage facility: *Not required.*
Further information about storage conditions: *None.*
Storage class: *13*
Specific end use(s) *No further relevant information available.*

8 Exposure controls/personal protection

Additional information about design of technical systems: *No further data; see item 7.*

Control parameters
Components with limit values that require monitoring at the workplace:
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

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Safety Data Sheet
acc. to OSHA HCS

Printing date 01/15/2023 *Reviewed on 05/11/2022*

Trade name: Amasteel

(Contd. of page 3)

7439-96-5 manganese	
PEL	Ceiling limit value: 5 mg/m³ as Mn
REL	Short-term value: 3 mg/m³ Long-term value: 1 mg/m³ fume, as Mn
TLV	Long-term value: 0.02* 0.1** mg/m³ as Mn; A4, *respirable **inhalable fraction
7440-21-3 silicon	
PEL	Long-term value: 15* 5** mg/m³ *total dust **respirable fraction
REL	Long-term value: 10* 5** mg/m³ *total dust **respirable fraction
TLV	TLV withdrawn

Regulatory information
PEL: Guide to Occupational Exposure Values (OSHA PELs)
REL: Guide to Occupational Exposure Values (NIOSH RELs)
TLV: Guide to Occupational Exposure Values (TLV)
Additional information: The lists that were valid during the creation were used as basis.

Exposure controls
Personal protective equipment:
Breathing equipment:
Use suitable respiratory protective device in case of insufficient ventilation.
Filter P2
Protection of hands: Leather gloves
Material of gloves Recommended thickness of the material: ≥ - mm
Penetration time of glove material Value for the permeation: Level ≤ -
Eye protection: Safety glasses
Body protection: Protective work clothing

9 Physical and chemical properties

Information on basic physical and chemical properties	
General Information	
Appearance:	
Form:	Solid
Odor:	Odorless
Odor threshold:	Not determined.
pH-value:	Not applicable.
Change in condition	
Melting point/Melting range:	1500 °C (2,732 °F) (~2700 °F)
Boiling point/Boiling range:	3000 °C (5,432 °F) (~5400 °F)
Flash point:	Not applicable.
Flammability (solid, gaseous):	Not determined.
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.

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(Contd. of page 4)

Explosion limits:	
Lower:	*Not determined.*
Upper:	*Not determined.*
Vapor pressure:	*Not applicable.*
Density at 20 °C (68 °F):	*7.8 g/cm³ (65.09 lbs/gal)*
Relative density	*Not determined.*
Vapor density	*Not applicable.*
Evaporation rate	*Not applicable.*
Solubility in / Miscibility with	
Water:	*Insoluble.*
Partition coefficient (n-octanol/water):	*Not determined.*
Viscosity:	
Dynamic:	*Not applicable.*
Kinematic:	*Not applicable.*
Solvent content:	
VOC content:	*0.00 %*
Solids content:	*100.0 %*
Other information	*No further relevant information available.*

10 Stability and reactivity

Reactivity *No further relevant information available.*
Chemical stability
Thermal decomposition / conditions to be avoided: *No decomposition if used according to specifications.*
Possibility of hazardous reactions *No dangerous reactions known.*
Conditions to avoid *No further relevant information available.*
Incompatible materials: *No further relevant information available.*
Hazardous decomposition products: *No dangerous decomposition products known.*

11 Toxicological information

Information on toxicological effects
Acute toxicity:
Primary irritant effect:
on the skin: *No irritant effect.*
on the eye: *No irritating effect.*
Sensitization:
Examination nickel release in accordance with DIN EN 1811: 2012-10: done
Sample Number 2016-00916
<0.1 µg per cm2 and week
therefore no sensitization detected
Additional toxicological information:
The product is not subject to classification according to internally approved calculation methods for preparations:
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

Carcinogenic categories

IARC (International Agency for Research on Cancer)		
7440-02-0	*Nickel*	*1*

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acc. to OSHA HCS

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NTP (National Toxicology Program)		
7440-02-0	Nickel	R

OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients is listed.

12 Ecological information

Toxicity
Aquatic toxicity: *No further relevant information available.*
Persistence and degradability *No further relevant information available.*
Behavior in environmental systems:
Bioaccumulative potential *No further relevant information available.*
Mobility in soil *No further relevant information available.*
Additional ecological information:
General notes: *Not hazardous for water.*
Results of PBT and vPvB assessment
PBT: *Not applicable.*
vPvB: *Not applicable.*
Other adverse effects *No further relevant information available.*

13 Disposal considerations

Uncleaned packagings:
Recommendation:
Disposal must be made according to official regulations.
completely emptied packaging in 25kg paper bag: paper recycling
completely emptied packaging in big bags: commercial waste disposal
completely emptied packaging in steel barrels: metal recycling

14 Transport information

UN-Number **DOT, ADR, ADN, IMDG, IATA**	*Void*
UN proper shipping name **DOT, ADR, ADN, IMDG, IATA**	*Void*
Transport hazard class(es) **DOT, ADR, ADN, IMDG, IATA** **Class**	*Void*
Packing group **DOT, ADR, IMDG, IATA**	*Void*
Environmental hazards:	*Not applicable.*
Special precautions for user	*Not applicable.*
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	*Not applicable.*

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acc. to OSHA HCS

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UN "Model Regulation":	Void

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
Sara

Section 355 (extremely hazardous substances):	
7723-14-0	red phosphorus

Section 313 (Specific toxic chemical listings):	
7439-96-5	manganese
7723-14-0	red phosphorus

TSCA (Toxic Substances Control Act):
All components have the value ACTIVE.

Hazardous Air Pollutants	
7439-96-5	manganese
7723-14-0	red phosphorus

Proposition 65
Warning: This product can expose you to chemicals including Nickel, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

Chemicals known to cause cancer:	
7440-02-0	Nickel

Chemicals known to cause reproductive toxicity for females:
None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed.

Chemicals known to cause developmental toxicity:
None of the ingredients is listed.

Cancerogenity categories

EPA (Environmental Protection Agency)		
7439-96-5	manganese	D
7723-14-0	red phosphorus	D

TLV (Threshold Limit Value)
None of the ingredients is listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients is listed.

GHS label elements *Void*
Hazard pictograms *Void*
Signal word *Void*
Hazard statements *Void*

National regulations:

Information about limitation of use: *Employment restrictions concerning young persons must be observed.*
Water hazard class: *Generally not hazardous for water.*

(Contd. on page 8)

Safety Data Sheet
acc. to OSHA HCS

(Contd. of page 7)

Chemical safety assessment: *A Chemical Safety Assessment has not been carried out.*

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

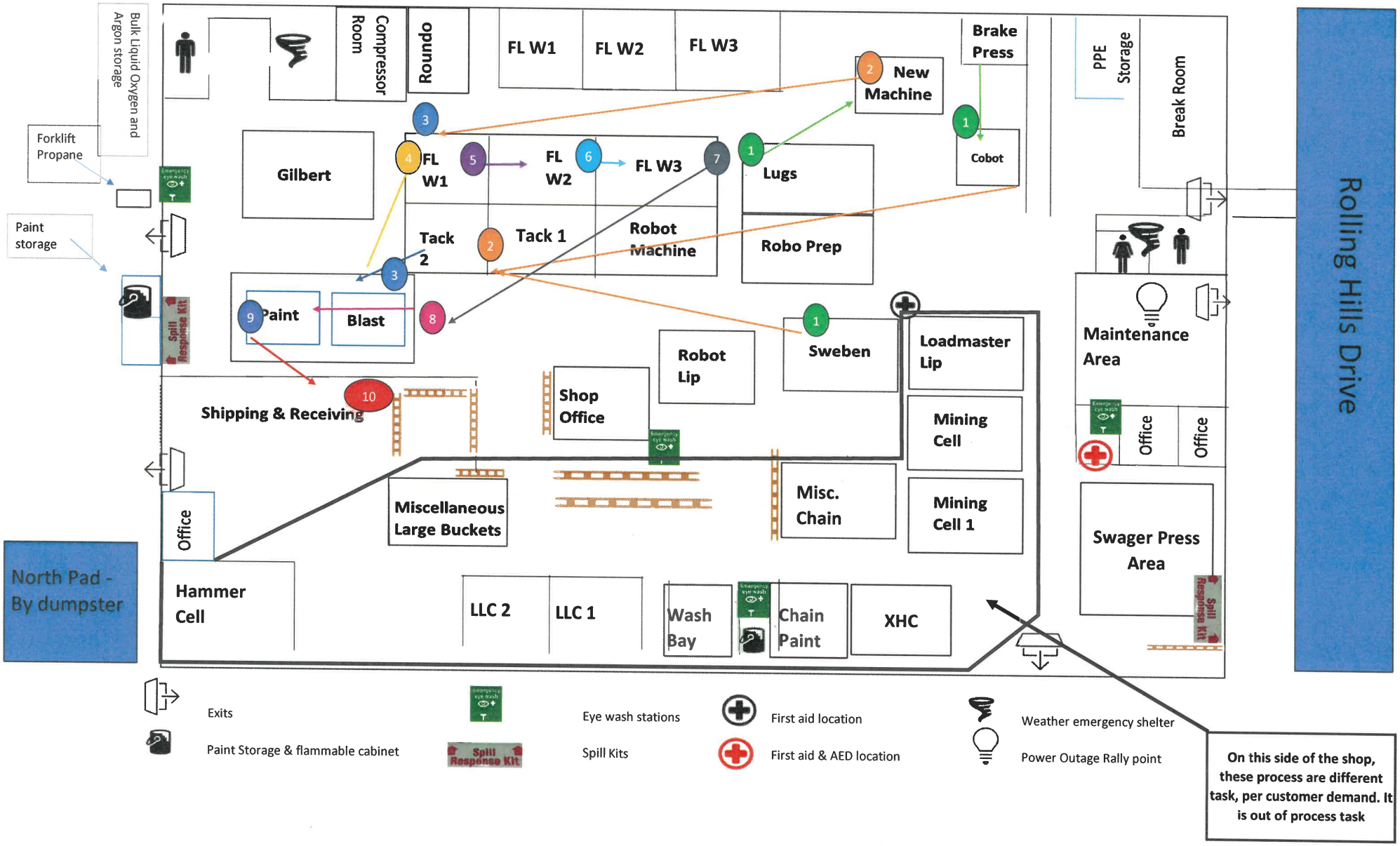
Motivo da mudança:
Version 2: 28.05.2015: Section 5.1 Extinguishing agents; 8.1 AGW measuring method.
Version 3: 06.09.2015: Section 1, 15, adaptation to the regulation 453/2015/EC, 830/2015/EU, 18/2012/EU
Version 4: 05.03.2016: Section 1.3
Version 5: 19.06.2016: Section 13
Version 6: 07.06.2019: Section 3, 8
Version 7: 16.02.2020: Section 13
Version 8: 18.02.2021: Section 1, 13, 15
Version 9: 11.05.2022: Section 2, 8, 15

Contact: *Dr. W. Assmann*

Date of preparation / last revision *01/15/2023*

Abbreviations and acronyms:
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit

*** Data compared to the previous version altered.** *Amasteel*
Safety Data Sheet: *AMASTEEL*



KEY		
	Steps for Colored line	
Step 1		Step 1, Brake press, Cobot, Sweben and Lugs get formed
Step 2		Step 2 All items from above EXECPT LUGS goes to the tack area to form the bucket together
Step 3		Step 3 Once bucket is tacked it gets blasted
Step 4		Step 4 The machined lugs along with the blasted bucket goes into weld 1 to be partially welded
Step 5		Step 5 The bucket goes to weld 2 and gets welded fully on one side
Step 6		Step 6 The bucket goes to weld 3 and gets welded on the opposite side and finished
Step 7		Step 7 The bucket goes to Final Assembly
Step 8		Step 8 The finished bucket gets blasted
Step 9		The Finished bucket gets painted
Step 10		The painted bucket get set out to ship

Dutch Standard Paints and Specialty Products

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HARRISON PAINT COMPANY

EXCELSIOR COATINGS

September 19, 2016

To Whom It May Concern:

This note is to certify that the following listed products do not contain Hazardous Air Pollutants (HAPs) equal to or greater than a reportable level of 1% w/w for non-carcinogens or in the case of carcinogens at a level equal to or greater than 0.1% w/w. The products may contain trace levels of HAPs at levels lower than the reportable quantities.

- 196-4359 DTM Water Reducible Alkyd Enamel – ESCO Red
- 196-4360 DTM Water Reducible Alkyd Enamel – ESCO Green

Certified by:

Greg Liebau
Vice President & Technical Director

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