



PROTECT WITH
CONFIDENCE

1. Product and Company Identification

Product Name: Raven 490 Part A

Raven Lining Systems
13105 East 61st Street, Suite A
Broken Arrow, OK 74012

www.ravenlining.com

Company Phone: (918) 615-0020
Company Toll Free: (800) 324-2810

CHEMTREC 24 hour Emergency USA: (800) 424-9300
CHEMTREC 24 hour International: (703) 527-3887

Product Use: Primer / Sealer / Coating / Lining
Not recommended for: Non Professional Use

2. Hazards Identification

Signal Word: Danger



GHS Ratings:

Flammable liquid	3	Flash point $\geq 23^{\circ}\text{C}$ and $\leq 60^{\circ}\text{C}$ (140°F).
Skin corrosive	2	Reversible adverse effects in dermal tissue, Draize score: $\geq 2.3 < 4.0$ or persistent inflammation.
Eye corrosive	2A	Eye irritant: Subcategory 2A, Reversible in 21 days.
Skin sensitizer	1	Skin sensitizer.
Reproductive toxin	1B	Presumed, Based on experimental animals.

GHS Hazards

H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H360	May damage fertility or the unborn child.

GHS Precautions

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
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/light/.../equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P281	Use personal protective equipment as required.

P321	Specific treatment (see Section 4 of the SDS).
P362	Take off contaminated clothing and wash before reuse.
P363	Wash contaminated clothing before reuse.
P302+P352	IF ON SKIN: Wash with soap and water.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P333+P313	If skin irritation or a rash occurs: Get medical advice/attention.
P337+P313	Get medical advice/attention.
P370+P378	In case of fire: Use water for or fine spray for extinction.
P405	Store locked up.
P403+P235	Store in a well ventilated place. Keep cool.
P501	Dispose of contents/container according to Section 13 of the SDS.

3. Composition / Information on Ingredients

Chemical Name	CAS number	Weight Concentration %
Epoxy Resin	25068-38-6	10 - 30%
Hydrous Magnesium Silicate	14807-96-6	10 - 30%
Titanium Dioxide	13463-67-7	10 - 30%
Crystalline Silica, Quartz	14808-60-7	10 - 30%
Polyfunctional Glycidyl Ether Modifier	74398-71-3	< 10%
Xylene	1330-20-7	< 7%
Acetone	67-64-1	< 1%
Adhesion Promoter		< 1%
Amorphous Fumed Silica	67762-90-7	< 1%

4. First Aid Measures

Inhalation: Remove to fresh air if effects occur. Consult a physician.

Eye Contact: Flush with large quantities of water for at least 15 minutes. Consult a physician.

Skin Contact: Wash thoroughly with soap and flowing water.

Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

Notes to Physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. Fire Fighting Measures

Flash Point: 37 C (99 F)

Flammable Properties: Product is considered a fire hazard, and will burn if ignited. NFPA Flammability Class IC.

The definition and classification of flammable and combustible liquids are addressed in NFPA 30. A flammable liquid is defined as a liquid whose flash point is < 100 deg F (38 deg C), while a combustible liquid is one whose flash point is \geq 100 deg F. These groups are further classified into the following NFPA Flammability Classes:

Class IA liquids are flammable liquids that have a flash point < 73 deg F (23 deg C) and boiling point < 100 deg F.

Class IB liquids are flammable liquids that have a flash point < 73 deg F and a boiling point \geq 100 deg F.

Class IC liquids are flammable liquids that have a flash point \geq 73 deg F, but < 100 deg F.

Class II liquids are combustible liquids that have a flash point > 100 deg F, but < 140 deg F (60 deg C).

Class IIIA liquids are combustible liquids that have a flash point \geq 140 deg F, but < 200 deg F (93 deg C).

Class IIIB liquids are combustible liquids that have a flash point \geq 200 deg F.

Suitable Extinguishing Media: Carbon dioxide, dry chemical, water fog or fine spray. Alcohol resistant foams are preferred, general purpose synthetic foams or protein foams may function, but will not be as effective.

Unsuitable Extinguishing Media: Do not use direct water stream, as it may spread fire.

Products of Combustion: Thermal decomposition in the presence of air may yield carbon monoxide, carbon dioxide, phenolics, acids, aldehydes, ketones and other unidentified toxic and/or irritating compounds.

Fire Fighting: Stay upwind and keep people away. Isolate fire and deny unnecessary entry. Keep out of low areas where gases (fumes) can accumulate. Water is not recommended, but may be applied in large quantities as a fine spray when other extinguishing agents are not available. Use water spray to cool fire-exposed containers and fire-affected zone until fire is out. Contain fire water run-off if possible, as it may cause environmental damage. Review section 6 and section 12 of this SDS.

Protection of Firefighters: Wear positive pressure self-contained breathing apparatus (SCBA) and approved protective clothing (helmet, coat, trousers, boots and gloves). If contact is likely, use full chemical resistant fire fighting clothing with SCBA.

6. Accidental Release Measures

Personal Precautions: Put on appropriate personal protective equipment (see section 8).

Environmental Precautions: Prevent spilled material from contact with soil, drains and sewers.

Methods for Containment: Contain by diking with sand, earth or other suitable material.

Methods for Clean-up: Absorb spill with an inert material, use non-sparking tools to place into labeled waste container for disposal.

7. Handling and Storage

Handling: Wear appropriate personal protective equipment (see section 8). Avoid contact with skin, eyes or clothing. Do not breathe vapor or mist. Do not ingest. Avoid prolonged or repeated contact with skin. May cause allergic skin reaction, persons with a history of skin sensitization should not be employed in any process in which this product is used. Wash thoroughly with soap and water after handling. Do not handle or store near flame, heat or strong oxidants. Keep away from sources of ignition and hot metal surfaces.

Storage: Store original unopened containers in a sheltered area between 60°F and 80°F (15°C and 27°C) at atmospheric pressure. Do not store in direct sunlight. Keep containers closed when not in use.

8. Exposure Controls / Personal Protection

Chemical Name / CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
Epoxy Resin 25068-38-6	Not Established	Not Established	Not Established
Hydrous Magnesium Silicate 14807-96-6	Not Established	2 mg/m ³ TWA (particulate matter containing no asbestos and <1% crystalline silica, respirable fraction)	NIOSH: 2 mg/m ³ TWA (containing no Asbestos and <1% Quartz, respirable dust)
Titanium Dioxide 13463-67-7	15 mg/m ³ TWA (total dust)	10 mg/m ³ TWA	Not Established
Crystalline Silica, Quartz 14808-60-7	0.05 mg/m ³ TWA (respirable fraction)	0.025 mg/m ³ TWA (respirable fraction)	NIOSH: 0.05 mg/m ³ TWA (respirable dust)
Polyfunctional Glycidyl Ether Modifier 74398-71-3	Not Established	Not Established	Not Established
Xylene 1330-20-7	100 ppm TWA; 435 mg/m ³ TWA	150 ppm STEL 100 ppm TWA	Not Established
Acetone 67-64-1	1000 ppm TWA; 2400 mg/m ³ TWA	500 ppm STEL 250 ppm TWA	NIOSH: 250 ppm TWA; 590 mg/m ³ TWA
Adhesion Promoter	Not Established	Not Established	Not Established

Amorphous Fumed Silica 67762-90-7	Not Established	Not Established	Not Established
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Engineering Controls: General mechanical ventilation is sufficient for most conditions. Control airborne levels below the exposure guidelines, if established.

Local exhaust ventilation may be necessary for some operations.

General Hygiene Considerations: Wash thoroughly after handling and before eating, drinking or smoking.

Eye/face Protection: Use chemical safety glasses, splash-proof eye goggles or goggles with full faceshield.

Skin Protection: Use nitrile or other impermeable chemical resistant gloves to prevent skin irritation. If potential for skin contact is present, wear impervious, long-sleeved, body covering clothing and rubber boots.

Respiratory Protection: Respiratory protection should not be needed. If exposure may or does exceed occupational exposure limits, respiratory irritation is experienced, or during spray application, use a properly fitted MSHA/NIOSH approved respirator fitted with organic vapor cartridges. In addition, spray application may require the use of paint pre-filters. If the respirator is the sole means of protection, use a full-face supplied air respirator. If sanding or grinding on cured material, use above respirator fitted with HEPA filters or a dust mask.

Contaminated Gear: Remove contaminated clothing and shoes while washing. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.

9. Physical and Chemical Properties

<p>Appearance Buff or Off-White</p> <p>Odor Threshold No data found</p> <p>pH No data found</p> <p>Boiling Point 138°C</p> <p>Flash Point 99°F, 37°C</p> <p>Flammability (solid, gas) No data found</p> <p>Vapor Pressure No data found</p> <p>Specific Gravity 1.5 - 1.8</p> <p>Partition Coefficient (n-octanol/water) No data found</p> <p>Decomposition Temperature No data found</p> <p>Lbs VOC/Gallon Less Water 0.8</p>	<p>Odor Mild</p> <p>Physical State Liquid</p> <p>Melting/Freezing Point No data found</p> <p>Boiling Range No data found</p> <p>Evaporation Rate No data found</p> <p>LEL/UEL No data found</p> <p>Vapor Density No data found</p> <p>Solubility in Water No data found</p> <p>Autoignition Temperature No data found</p> <p>Viscosity No data found</p>
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10. Stability and Reactivity

Chemical Stability: Stable under recommended storage conditions (see Section 7).

Conditions to Avoid: Avoid temperatures above 450 deg F (230 deg C), potential violent decomposition may occur.

Incompatible Materials: Strong acids, bases, or oxidizing agents. Avoid unintended contact with amines.

Products of Combustion: Thermal decomposition in the presence of air may yield carbon monoxide, carbon dioxide, phenolics, acids, aldehydes, ketones and other unidentified toxic and/or irritating compounds.

Hazardous polymerization will not occur.

11. Toxicological Information

Mixture Toxicity

Oral Toxicity LD50: 3,104mg/kg

Inhalation Toxicity LC50: 710mg/L

Component Toxicity

1330-20-7

Xylene

Oral LD50: 3,500 mg/kg (Rat) Dermal LD50: 4,350 mg/kg (Rabbit) Inhalation LC50: 29 mg/L (Rat)

67-64-1

Acetone

Inhalation LC50: 50 mg/L (Rat)

Likely Routes of Exposure:

No data found

Target Organs

May cause damage to the following organs:

Eyes Central Nervous System Skin Cardiovascular System Respiratory System

Effects of Overexposure

Carcinogenicity: This product contains crystalline silica (quartz), a substance that has been classified as carcinogenic to humans when inhaled. In this product, it is pre-dispersed and not available as a dust. Under normal use conditions it would not be considered a hazard.

Carcinogenicity: Titanium dioxide has been characterized by IARC as possibly carcinogenic to humans (Group 2b) through inhalation (not ingestion), based on lifetime inhalation studies of rats. The IARC's findings were consistent with the massive accumulation of fine dust particles in the rat's lung (which overwhelm the natural lung clearance mechanisms, causing lung overloading) and consequential pulmonary overload and inflammation that causes lung cancer. In further studies, these tumors were found to occur only under particle overload conditions in a uniquely sensitive species, the rat, and have little or no relevance for humans. Epidemiology studies on more than 20,000 workers do not suggest an increased risk of cancer in humans from occupational exposure to titanium dioxide. If present in this product, the titanium dioxide is in a "wet out" form and does not pose an inhalation hazard.

<u>CAS Number</u>	<u>Description</u>	<u>% Weight</u>	<u>Carcinogen Rating</u>
14808-60-7	Crystalline Silica, Quartz	10 - 30%	Crystalline Silica, Quartz: NIOSH: potential occupational carcinogen IARC: Human carcinogen OSHA: listed
13463-67-7	Titanium Dioxide	10 - 30%	Titanium Dioxide: NIOSH: potential occupational carcinogen IARC: Possible human carcinogen OSHA: listed

12. Ecological Information

Component Ecotoxicity

Epoxy Resin	Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).
Hydrous Magnesium Silicate	96 Hr LC50 Brachydanio rerio: >100 g/L [semi-static]
Xylene	96 Hr LC50 Pimephales promelas: 13.4 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 2.661 - 4.093 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 13.5 - 17.3 mg/L; 96 Hr LC50 Lepomis macrochirus: 13.1 - 16.5 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 19 mg/L; 96 Hr LC50 Lepomis macrochirus: 7.711 - 9.591 mg/L [static]; 96 Hr LC50 Pimephales promelas: 23.53 - 29.97 mg/L [static]; 96 Hr LC50 Cyprinus carpio: 780 mg/L [semi-static]; 96 Hr LC50 Cyprinus carpio: >780 mg/L; 96 Hr LC50 Poecilia reticulata: 30.26 - 40.75 mg/L [static] 48 Hr EC50 water flea: 3.82 mg/L; 48 Hr LC50 Gammarus lacustris: 0.6 mg/L
Acetone	96 Hr LC50 Oncorhynchus mykiss: 4.74 - 6.33 mL/L; 96 Hr LC50 Pimephales promelas: 6210 - 8120 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 8300 mg/L 48 Hr EC50 Daphnia magna: 10294 - 17704 mg/L [Static]; 48 Hr EC50 Daphnia magna: 12600 - 12700 mg/L

13. Disposal Considerations

Waste Disposal Methods: Dispose of in accordance with federal, state and local regulations. The preferred method for disposal of uncontaminated product is by recycling, reclaiming, incineration or other thermal destruction device using a licensed and permitted waste disposal contractor.

14. Transport Information

<u>Agency</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT	Paint	UN1263	III	3
ICAO/IATA	Paint	UN1263	III	3
IMDG	Paint	UN1263	III	3
TDG	Paint	UN1263	III	3

15. Regulatory Information

USA Federal: This SDS has been prepared in compliance with the Occupational Safety and Health Act (OSHA) Hazard Communication Standard (29 CFR 1910.1200). This product is considered to be a hazardous chemical under that standard. The specific chemical identity and/or exact percentage of any proprietary ingredient(s) may be withheld as a trade secret, pursuant to the standard.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): To the best of our knowledge, this product contains the following chemicals which are known to the State of California to cause cancer or reproductive toxicity at levels which require warning under this statute:

- 14808-60-7 Crystalline Silica, Quartz 10 to 30 %
- 13463-67-7 Titanium Dioxide 10 to 30 %

USA Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) - section 103 Hazardous Substances Reportable Quantities (RQs): To the best of our knowledge, this product contains the following chemicals which are listed in 40 CFR 302.4:

- 67-64-1 Acetone < 1 %
- 1330-20-7 Xylene < 7 %

Massachusetts Right to Know: To the best of our knowledge, this product contains the following chemicals at levels which require reporting under this statute:

- 67-64-1 Acetone < 1 %
- 1330-20-7 Xylene < 7 %
- 14808-60-7 Crystalline Silica, Quartz 10 to 30 %
- 13463-67-7 Titanium Dioxide 10 to 30 %
- 14807-96-6 Hydrous Magnesium Silicate 10 to 30 %

New Jersey Right to Know: To the best of our knowledge, this product contains the following chemicals at levels which require reporting under this statute:

- 67-64-1 Acetone < 1 %
- 1330-20-7 Xylene < 7 %
- 14808-60-7 Crystalline Silica, Quartz 10 to 30 %
- 13463-67-7 Titanium Dioxide 10 to 30 %
- 14807-96-6 Hydrous Magnesium Silicate 10 to 30 %

Pennsylvania Right to Know: To the best of our knowledge, this product contains the following chemicals at levels which require reporting under this statute:

- 67-64-1 Acetone < 1 %
- 1330-20-7 Xylene < 7 %
- 14808-60-7 Crystalline Silica, Quartz 10 to 30 %
- 13463-67-7 Titanium Dioxide 10 to 30 %
- 14807-96-6 Hydrous Magnesium Silicate 10 to 30 %

USA Resource Conservation and Recovery Act (40 CFR 261): To the best of our knowledge, this product contains the following chemicals at levels which require reporting under this statute:

- 67-64-1 Acetone < 1 %
- 1330-20-7 Xylene < 7 %

USA Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) - section 302 Extremely Hazardous Substances Threshold Planning Quantities (TPQs): To the best of our knowledge, this product contains the following chemicals at levels which require reporting under this statute:

- None

USA Toxic Substances Control Act (TSCA) - section 12(b): To the best of our knowledge, this product contains the following chemicals above the de minimus concentration(s) which requires notification to the Environmental Protection Agency (EPA) per 40 CFR 707, subpart D, if any person intends to export:

- None

<u>Country</u>	<u>Regulation</u>	<u>All Components Listed</u>
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Canada Domestic Substance List	Yes
Canada	Canada Non-Domestic Substances List (NDSL)	No
China	China Inventory of Existing Chemical Substances	Yes
EU	EU REACH List of Registered Intermediates	No
EU	EU REACH List of Pre-Registered Substances	Yes
EU	EU REACH List of Registered Substances	No
Japan	Japanese Existing and New Chemical Substances List	No
South Korea	South Korea Existing Chemicals Inventory	Yes
Philippines	Philippines Inventory of Chemicals and Chemical	No
USA	USA TSCA Inventory list section 8(b)	Yes

- None

16. Other Information

Legend

ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
ADR/RID	European Agreement for transport of dangerous goods by road (ADR) and by rail (RID)
CAS No.	Chemical Abstract Service Registry Number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act, AKA "Superfund"
DOT	Department of Transportation (USA)
HCS	OSHA Hazard Communication Standard (29 CFR 1910.1200)
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMO	International Maritime Organization
IMDG	International Maritime Dangerous Goods
MSHA	Mine Safety and Health Administration
N.A.	Not Applicable
N.D.	Not Determined
N.E.	Not Established
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration (USA)
PEL	Permissible Exposure Limit
SARA	Superfund Amendments and Reauthorization Act of 1986 (40 CFR)
STEL	Short Term Exposure Limit (15 minute Time Weighted Average)
TDG	Canada Transport of Dangerous Goods regulations

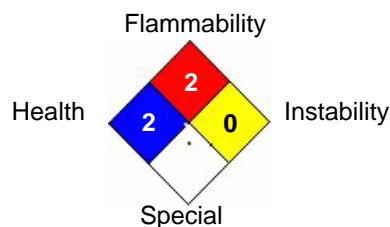
TLV Threshold Limit Value
TWA Time Weighted Average
WHMIS Canada Workplace Hazardous Materials Information System

Hazardous Material Information System (HMIS)

HEALTH	<input type="text" value="2"/>
FLAMMABILITY	<input type="text" value="2"/>
PHYSICAL HAZARD	<input type="text" value="0"/>
PERSONAL PROTECTION	<input type="text"/>

HMIS & NFPA Hazard Rating Legend
* = Chronic Health Hazard
0 = INSIGNIFICANT
1 = SLIGHT
2 = MODERATE
3 = HIGH

National Fire Protection Association (NFPA)



Disclaimer

RAVEN LINING SYSTEMS MAKES NO REPRESENTATIONS OR WARRANTIES WITH RESPECT TO ANY INFORMATION PRESENTED HEREIN, ALL OF WHICH IS PROVIDED "AS IS". TO THE MAXIMUM EXTENT PERMITTED BY LAW, RAVEN EXPRESSLY EXCLUDES ALL WARRANTIES, OBLIGATIONS, REPRESENTATIONS, LIABILITIES, TERMS AND CONDITIONS (WHETHER THEY ARE EXPRESS OR IMPLIED, OR ARISE IN CONTRACT, STATUTE, OR OTHERWISE, AND IRRESPECTIVE OF THE NEGLIGENCE OF RAVEN, ITS EMPLOYEES OR AGENTS) IN CONNECTION WITH THE INFORMATION PRESENTED HEREIN. RAVEN MAKES NO REPRESENTATIONS OR WARRANTIES AS TO MERCHANTABILITY, FITNESS FOR PURPOSE, NONINFRINGEMENT OR CONFORMITY WITH DESCRIPTION OR SAMPLE.

Reviewer Revision

Date Prepared: 8/18/2017



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1. Product and Company Identification

Product Name: Raven 490 Part B

Raven Lining Systems
13105 East 61st Street, Suite A
Broken Arrow, OK 74012

www.ravenlining.com

Company Phone: (918) 615-0020
Company Toll Free: (800) 324-2810

CHEMTREC 24 hour Emergency USA: (800) 424-9300
CHEMTREC 24 hour International: (703) 527-3887

Product Use: Primer / Sealer / Coating / Lining
Not recommended for: Non Professional Use

2. Hazards Identification

Signal Word: Danger



GHS Ratings:

Flammable liquid	3	Flash point $\geq 23^{\circ}\text{C}$ and $\leq 60^{\circ}\text{C}$ (140°F).
Skin corrosive	2	Reversible adverse effects in dermal tissue, Draize score: $\geq 2.3 < 4.0$ or persistent inflammation.
Eye corrosive	1	Serious eye damage: Irreversible damage 21 days after exposure, Draize score: Corneal opacity ≥ 3 , Iritis > 1.5
Respiratory sensitizer	1	Respiratory sensitizer.
Skin sensitizer	1	Skin sensitizer.
Reproductive toxin	1B	Presumed, Based on experimental animals.

GHS Hazards

H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H360	May damage fertility or the unborn child.

GHS Precautions

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
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/light/.../equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.

P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P281	Use personal protective equipment as required.
P285	In case of inadequate ventilation wear respiratory protection.
P310	Immediately call a POISON CENTER or doctor/physician.
P321	Specific treatment (see Section 4 of the SDS).
P362	Take off contaminated clothing and wash before reuse.
P363	Wash contaminated clothing before reuse.
P302+P352	IF ON SKIN: Wash with soap and water.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P341	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P333+P313	If skin irritation or a rash occurs: Get medical advice/attention.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P370+P378	In case of fire: Use water for or fine spray for extinction.
P405	Store locked up.
P403+P235	Store in a well ventilated place. Keep cool.
P501	Dispose of contents/container according to Section 13 of the SDS.

3. Composition / Information on Ingredients

Chemical Name	CAS number	Weight Concentration %
Phenalkamine Curing Agent		30 - 60%
Modified Polyamide		15 - 40%
1-Butanol	71-36-3	1 - 5%
Xylene	1330-20-7	1 - 5%
Aliphatic Amine	1477-55-0	1 - 5%

4. First Aid Measures

Inhalation: Remove to fresh air if effects occur. Consult a physician.

Eye Contact: Flush with large quantities of water for at least 15 minutes. Consult a physician.

Skin Contact: Wash thoroughly with soap and flowing water.

Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

Notes to Physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. Fire Fighting Measures

Flash Point: 37 C (99 F)

Flammable Properties: Product is considered a fire hazard, and will burn if ignited.

The definition and classification of flammable and combustible liquids are addressed in NFPA 30. A flammable liquid is defined as a liquid whose flash point is < 100 deg F (38 deg C), while a combustible liquid is one whose flash point is ≥ 100 deg F. These groups are further classified into the following NFPA Flammability Classes:

Class IA liquids are flammable liquids that have a flash point < 73 deg F (23 deg C) and boiling point < 100 deg F.

Class IB liquids are flammable liquids that have a flash point < 73 deg F and a boiling point ≥ 100 deg F.

Class IC liquids are flammable liquids that have a flash point ≥ 73 deg F, but < 100 deg F.
 Class II liquids are combustible liquids that have a flash point > 100 deg F, but < 140 deg F (60 deg C).
 Class IIIA liquids are combustible liquids that have a flash point ≥ 140 deg F, but < 200 deg F (93 deg C).
 Class IIIB liquids are combustible liquids that have a flash point ≥ 200 deg F.

Suitable Extinguishing Media: Carbon dioxide, dry chemical, water fog or fine spray. Alcohol resistant foams are preferred, general purpose synthetic foams or protein foams may function, but will not be as effective.

Unsuitable Extinguishing Media: Do not use direct water stream, as it may spread fire.

Products of Combustion: Thermal decomposition in the presence of air may yield carbon monoxide, carbon dioxide, phenolics, ammonia, nitrogen oxides and other unidentified toxic and/or irritating compounds.

Fire Fighting: Stay upwind and keep people away. Isolate fire and deny unnecessary entry. Keep out of low areas where gases (fumes) can accumulate. Water is not recommended, but may be applied in large quantities as a fine spray when other extinguishing agents are not available. Use water spray to cool fire-exposed containers and fire-affected zone until fire is out. Contain fire water run-off if possible, as it may cause environmental damage. Review section 6 and section 12 of this SDS.

Protection of Firefighters: Wear positive pressure self-contained breathing apparatus (SCBA) and approved protective clothing (helmet, coat, trousers, boots and gloves). If contact is likely, use full chemical resistant fire fighting clothing with SCBA.

6. Accidental Release Measures

Personal Precautions: Put on appropriate personal protective equipment (see section 8).

Environmental Precautions: Prevent spilled material from contact with soil, drains and sewers.

Methods for Containment: Contain by diking with sand, earth or other suitable material.

Methods for Clean-up: Absorb spill with an inert material, use non-sparking tools to place into labeled waste container for disposal.

7. Handling and Storage

Handling: Wear appropriate personal protective equipment (see section 8). Avoid contact with skin, eyes or clothing. Do not breathe vapor or mist. Do not ingest. Avoid prolonged or repeated contact with skin. May cause allergic skin reaction, persons with a history of skin sensitization should not be employed in any process in which this product is used. Wash thoroughly with soap and water after handling. Do not handle or store near flame, heat or strong oxidants. Keep away from sources of ignition and hot metal surfaces.

Storage: Store original unopened containers in a sheltered area between 60°F and 80°F (15°C and 27°C) at atmospheric pressure. Do not store in direct sunlight. Keep containers closed when not in use.

8. Exposure Controls / Personal Protection

Chemical Name / CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
Phenalkamine Curing Agent	Not Established	Not Established	Not Established
Modified Polyamide	Not Established	Not Established	Not Established
1-Butanol 71-36-3	100 ppm TWA; 300 mg/m ³ TWA	20 ppm TWA	NIOSH: 50 ppm Ceiling; 150 mg/m ³ Ceiling
Xylene 1330-20-7	100 ppm TWA; 435 mg/m ³ TWA	150 ppm STEL 100 ppm TWA	Not Established
Aliphatic Amine 1477-55-0	Not Established	0.1 mg/m ³ Ceiling	NIOSH: 0.1 mg/m ³ Ceiling

Engineering Controls: General mechanical ventilation is sufficient for most conditions. Control airborne levels below the exposure guidelines, if established.

Local exhaust ventilation may be necessary for some operations.

General Hygiene Considerations: Wash thoroughly after handling and before eating, drinking or smoking.

Eye/face Protection: Use chemical safety glasses, splash-proof eye goggles or goggles with full faceshield.

Skin Protection: Use nitrile or other impermeable chemical resistant gloves to prevent skin irritation. If potential for skin contact is present, wear impervious, long-sleeved, body covering clothing and rubber boots.

Respiratory Protection: Respiratory protection should not be needed. If exposure may or does exceed occupational

exposure limits, respiratory irritation is experienced, or during spray application, use a properly fitted MSHA/NIOSH approved respirator fitted with organic vapor cartridges. In addition, spray application may require the use of paint pre-filters. If the respirator is the sole means of protection, use a full-face supplied air respirator. If sanding or grinding on cured material, use above respirator fitted with HEPA filters or a dust mask.

Contaminated Gear: Remove contaminated clothing and shoes while washing. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.

9. Physical and Chemical Properties

<p>Appearance Clear to dark yellow</p> <p>Odor Threshold No data found</p> <p>pH No data found</p> <p>Boiling Point 118°C</p> <p>Flash Point 99°F, 37°C</p> <p>Flammability (solid, gas) No data found</p> <p>Vapor Pressure No data found</p> <p>Specific Gravity 0.9 - 1.1</p> <p>Partition Coefficient (n-octanol/water) No data found</p> <p>Decomposition Temperature No data found</p> <p>Lbs VOC/Gallon Less Water 0.8</p>	<p>Odor Ammonia-like</p> <p>Physical State Liquid</p> <p>Melting/Freezing Point No data found</p> <p>Boiling Range No data found</p> <p>Evaporation Rate No data found</p> <p>LEL/UEL No data found</p> <p>Vapor Density No data found</p> <p>Solubility in Water No data found</p> <p>Autoignition Temperature No data found</p> <p>Viscosity No data found</p>
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10. Stability and Reactivity

Chemical Stability: Stable under recommended storage conditions (see Section 7).

Conditions to Avoid: Elevated temperatures may cause product to decompose.

Incompatible Materials: Strong acids, bases, or oxidizing agents. Avoid unintended contact with isocyanates and/or epoxies.

Products of Combustion: Thermal decomposition in the presence of air may yield carbon monoxide, carbon dioxide, phenolics, ammonia, nitrogen oxides and other unidentified toxic and/or irritating compounds.

Hazardous polymerization will not occur.

11. Toxicological Information

Mixture Toxicity

Inhalation Toxicity LC50: 570mg/L

Component Toxicity

- 71-36-3 1-Butanol
Oral LD50: 700 mg/kg (Rat) Dermal LD50: 3,402 mg/kg (Rabbit)
- 1330-20-7 Xylene
Oral LD50: 3,500 mg/kg (Rat) Dermal LD50: 4,350 mg/kg (Rabbit) Inhalation LC50: 29 mg/L (Rat)
- 1477-55-0 Aliphatic Amine
Oral LD50: 660 mg/kg (Rat) Dermal LD50: 2,000 mg/kg (Rabbit) Inhalation LC50: 700 ppm (Rat)

Likely Routes of Exposure:

No data found

Target Organs

May cause damage to the following organs:

- Eyes Kidneys Liver Central Nervous System Skin Respiratory System

Effects of Overexposure

12. Ecological Information

Component Ecotoxicity

1-Butanol	96 Hr LC50 Pimephales promelas: 1730 - 1910 mg/L [static]; 96 Hr LC50 Pimephales promelas: 1740 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 100000 - 500000 µg/L [static]; 96 Hr LC50 Pimephales promelas: 1910000 µg/L [static] 48 Hr EC50 Daphnia magna: 1983 mg/L; 48 Hr EC50 Daphnia magna: 1897 - 2072 mg/L [Static] 96 Hr EC50 Desmodesmus subspicatus: >500 mg/L; 72 Hr EC50 Desmodesmus subspicatus: >500 mg/L
Xylene	96 Hr LC50 Pimephales promelas: 13.4 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 2.661 - 4.093 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 13.5 - 17.3 mg/L; 96 Hr LC50 Lepomis macrochirus: 13.1 - 16.5 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 19 mg/L; 96 Hr LC50 Lepomis macrochirus: 7.711 - 9.591 mg/L [static]; 96 Hr LC50 Pimephales promelas: 23.53 - 29.97 mg/L [static]; 96 Hr LC50 Cyprinus carpio: 780 mg/L [semi-static]; 96 Hr LC50 Cyprinus carpio: >780 mg/L; 96 Hr LC50 Poecilia reticulata: 30.26 - 40.75 mg/L [static] 48 Hr EC50 water flea: 3.82 mg/L; 48 Hr LC50 Gammarus lacustris: 0.6 mg/L

13. Disposal Considerations

Waste Disposal Methods: Dispose of in accordance with federal, state and local regulations. The preferred method for disposal of uncontaminated product is by recycling, reclaiming, incineration or other thermal destruction device using a licensed and permitted waste disposal contractor.

14. Transport Information

<u>Agency</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT	Paint	UN1263	III	3
ICAO/IATA	Paint	UN1263	III	3
IMDG	Paint	UN1263	III	3
TDG	Paint	UN1263	III	3

15. Regulatory Information

USA Federal: This SDS has been prepared in compliance with the Occupational Safety and Health Act (OSHA) Hazard Communication Standard (29 CFR 1910.1200). This product is considered to be a hazardous chemical under that standard. The specific chemical identity and/or exact percentage of any proprietary ingredient(s) may be withheld as a trade secret, pursuant to the standard.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): To the best of our knowledge, this product contains the following chemicals which are known to the State of California to cause cancer or reproductive toxicity at levels which require warning under this statute:

- None

USA Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) - section 103 Hazardous Substances Reportable Quantities (RQs): To the best of our knowledge, this product contains the following chemicals which are listed in 40 CFR 302.4:

1330-20-7 Xylene 1 to 5 %

71-36-3 1-Butanol 1 to 5 %

Massachusetts Right to Know: To the best of our knowledge, this product contains the following chemicals at levels which require reporting under this statute:

1477-55-0 Aliphatic Amine 1 to 5 %
71-36-3 1-Butanol 1 to 5 %
1330-20-7 Xylene 1 to 5 %

New Jersey Right to Know: To the best of our knowledge, this product contains the following chemicals at levels which require reporting under this statute:

1477-55-0 Aliphatic Amine 1 to 5 %
71-36-3 1-Butanol 1 to 5 %
1330-20-7 Xylene 1 to 5 %

Pennsylvania Right to Know: To the best of our knowledge, this product contains the following chemicals at levels which require reporting under this statute:

1477-55-0 Aliphatic Amine 1 to 5 %
1330-20-7 Xylene 1 to 5 %
71-36-3 1-Butanol 1 to 5 %

USA Resource Conservation and Recovery Act (40 CFR 261): To the best of our knowledge, this product contains the following chemicals at levels which require reporting under this statute:

71-36-3 1-Butanol 1 to 5 %
1330-20-7 Xylene 1 to 5 %

USA Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) - section 302 Extremely Hazardous Substances Threshold Planning Quantities (TPQs): To the best of our knowledge, this product contains the following chemicals at levels which require reporting under this statute:

- None

USA Toxic Substances Control Act (TSCA) - section 12(b): To the best of our knowledge, this product contains the following chemicals above the de minimus concentration(s) which requires notification to the Environmental Protection Agency (EPA) per 40 CFR 707, subpart D, if any person intends to export:

- None

Country	Regulation	All Components Listed
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Canada Domestic Substance List	No
Canada	Canada Non-Domestic Substances List (NDSL)	No
China	China Inventory of Existing Chemical Substances	Yes
EU	EU REACH List of Registered Intermediates	No
EU	EU REACH List of Pre-Registered Substances	Yes
EU	EU REACH List of Registered Substances	Yes
Japan	Japanese Existing and New Chemical Substances List	Yes
South Korea	South Korea Existing Chemicals Inventory	Yes
Philippines	Philippines Inventory of Chemicals and Chemical	No
USA	USA TSCA Inventory list section 8(b)	Yes

- None

16. Other Information

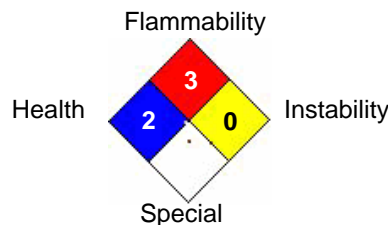
Legend	
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
ADR/RID	European Agreement for transport of dangerous goods by road (ADR) and by rail (RID)
CAS No.	Chemical Abstract Service Registry Number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act, AKA "Superfund"
DOT	Department of Transportation (USA)
HCS	OSHA Hazard Communication Standard (29 CFR 1910.1200)
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMO	International Maritime Organization
IMDG	International Maritime Dangerous Goods
MSHA	Mine Safety and Health Administration
N.A.	Not Applicable
N.D.	Not Determined
N.E.	Not Established
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration (USA)
PEL	Permissible Exposure Limit
SARA	Superfund Amendments and Reauthorization Act of 1986 (40 CFR)
STEL	Short Term Exposure Limit (15 minute Time Weighted Average)
TDG	Canada Transport of Dangerous Goods regulations
TLV	Threshold Limit Value
TWA	Time Weighted Average
WHMIS	Canada Workplace Hazardous Materials Information System

Hazardous Material Information System (HMIS)

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FLAMMABILITY	<input type="text" value="3"/>
PHYSICAL HAZARD	<input type="text" value="0"/>
PERSONAL PROTECTION	<input type="text" value=""/>

HMIS & NFPA Hazard Rating Legend
 * = Chronic Health Hazard
 0 = INSIGNIFICANT
 1 = SLIGHT
 2 = MODERATE
 3 = HIGH

National Fire Protection Association (NFPA)



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Reviewer Revision

Date Prepared: 7/5/2017