

SAFETY DATA SHEET

SECTION 1 – IDENTIFICATION

Manufacturer's name and address:



ARDEX Americas
400 Ardex Park Dr.
Aliquippa, PA 15001 USA

Supplier's name and address:

Refer to Manufacturer

Information Telephone No. : 1-(888)-512-7339 or 1-(724) 203-5000
Website Address : <http://www.ardexamericas.com>
24 Hr Emergency Telephone # : CHEM-TEL: 1-800-255-3924 OR 1-813-248-0585 (call collect)
Product Identifier : **ARDEX MC™ RAPID Resin (Part A)**
Product Code : 70013741
Chemical Family : Mixture
Trade Name/Synonyms : ARDEX MC RAPID Resin
Material Use : One-Coat Moisture Control System for Concrete to Receive ARDEX Products
Uses Advised Against : No information available.

SECTION 2 – HAZARDS IDENTIFICATION

GHS Classification per 29 CFR 1910.1200 (OSHA HCS 2012) and HPR (WHMIS 2015)

: Skin Sensitizer Category 1
: Eye Irritant Category 2A
: Skin Irritant Category 2

GHS Pictograms :



Signal Word :

Warning

Hazard Statements :

Causes serious eye irritation.
May cause an allergic skin reaction.
Causes skin irritation.

Precautionary Statements :

Do not get in eyes, on skin, or on clothing. Avoid breathing vapors or dust. Use in a well-ventilated area. Wash hands and exposed skin thoroughly after handling. Wear protective gloves and eye protection. Keep container tightly closed. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Store in a well-ventilated place. Dispose of contents / container in accordance with federal, state, and local laws. Do not allow product to enter drains.

Hazards Not Otherwise Identified :

None

Unknown Acute Toxicity Content :

< 30% of this product consists of ingredients with unknown acute toxicity.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS #	% (by weight)
Polymer: Bisphenol F + epichlorohydrin epoxy resin	55492-52-9	10.00 – 30.00
Polymer: Bisphenol A + epichlorohydrin epoxy resin	25068-38-6	10.00 – 30.00

Alkyl (C12-14) glycidyl ether	68609-97-2	5.00 – 10.00
1-Methyl-2-pyrrolidone	872-50-4	0.10 – 1.00

The exact percentages of the ingredients have been withheld by the manufacturer as trade secrets.

SECTION 4 – FIRST AID MEASURES

- General** : Get medical attention if you feel unwell.
- Inhalation** : Remove person to fresh air and keep at rest in a position comfortable for breathing. Get medical attention.
- Skin contact** : Remove contaminated clothing. Flush affected skin with water. If irritation persists: seek medical attention/advice.
- Eye contact** : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
- Ingestion** : Rinse mouth. Do NOT induce vomiting. Get medical advice/attention if you feel unwell.
- Notes for Physician** : Treat symptomatically.
- Signs and symptoms of short-term (acute) exposure**
- Inhalation* : Inhalation of vapors may cause mild irritation of the respiratory system. Symptoms may include coughing and shortness of breath.
- Skin* : Causes irritation. Symptoms may include redness and itching. Prolonged or repeated skin contact may cause an allergic skin reaction.
- Eyes* : Causes irritation. Symptoms may include redness, itching or pain.
- Ingestion* : May cause stomach pain with nausea and vomiting.

Effects of long-term (chronic) exposure

- : Prolonged inhalation may cause adverse lung effects with symptoms including coughing and shortness of breath. Some individuals may experience a sensitization reaction of the skin after an initial exposure. Subsequent exposures may cause a hypersensitive skin reaction (rash, swelling).

Indication of need for immediate medical attention or special treatment

In case of accident or illness, seek medical advice immediately (show label or SDS if possible).

SECTION 5 – FIRE FIGHTING MEASURES

- Suitable extinguishing media** : Carbon dioxide, dry chemical powder, foam, water mist/fog.
- Unsuitable extinguishing media** : Water jet may spread the flames.
- Hazardous combustion products** : Carbon oxides, nitrogen oxides, and/or low molecular weight hydrocarbons.
- Special fire-fighting procedures/equipment**
- : Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame. After fires have been extinguished, carefully clean all equipment and surfaces exposed to fumes.
- Flammability classification (OSHA 29 CFR 1910.1200, WHMIS 2015)**
- : Not flammable

SECTION 6 – ACCIDENTAL RELEASE MEASURES

- Personal precautions** : Wear chemically resistant personal protective equipment during cleanup. Restrict access to area until completion of clean-up. All persons dealing with clean-up should wear the appropriate chemically protective equipment.
- Protective equipment** : Refer to Section 8 on this Safety Data Sheet, EXPOSURE CONTROLS / PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.

- Emergency procedures** : If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8002). Outside of the U.S. call the emergency number listed in Section 1.
US CERCLA Reportable quantity (RQ): None reported.
- Spill response / clean-up** : Ventilate area of release. Stop spill or leak at source if safely possible. Contain product with inert absorbent material, preventing it from entering sewer lines or waterways. Gather up spilled material and place in suitable container for later disposal. Notify the appropriate authorities as required.
- Environmental precautions** : Do not allow product to enter waterways. Do not allow material to contaminate ground water system.
- Disposal of spilled material** : See Section 13.

SECTION 7 – HANDLING AND STORAGE

- Safe handling procedures** : Observe good hygiene standards. Do not eat, drink or smoke in the work area. Wash thoroughly after handling. Avoid contact with skin and eyes. Avoid repeated or prolonged skin contact. Avoid breathing vapors or mists of this product. Wear protective clothing to prevent skin contact. Promptly remove any clothing that becomes contaminated. Clean contaminated clothing before reuse. Keep container tightly closed. Use only with adequate ventilation.
- Storage requirements** : Store in a cool, dry, well-ventilated area. Store away from heat and open flame. Avoid storing in direct sunlight. Store in original container. Keep tightly closed when not in use. Do not reuse empty container without commercial cleaning or reconditioning.
- Incompatible materials** : Strong oxidizing agents.
- Special packaging materials** : Always keep in containers made of the same materials as the supply container.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

- Exposure limits** : No exposure limits have been established for the product. Below are exposure limits for the ingredients in the product.

Ingredients	CAS #	ACGIH TLV		OSHA PEL	
		TWA	STEL	PEL	STEL
Polymer: Bisphenol F + epichlorohydrin epoxy resin	55492-52-9	N/Av	N/Av	N/Av	N/Av
Polymer: Bisphenol A + epichlorohydrin epoxy resin	25068-38-6	N/Av	N/Av	N/Av	N/Av
Alkyl (C12-14) glycidyl ether	68609-97-2	N/Av	N/Av	N/Av	N/Av
1-Methyl-2-pyrrolidone	872-50-4	N/Av	N/Av	N/Av	N/Av
		10 ppm (USA WEEL)			

- Engineering measures** : Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits. Ventilation should effectively remove and prevent buildup of any vapor or mist generated from the handling of this product.
- Eye / face protection** : Chemical goggles or safety glasses must be worn when using this product. A face shield is recommended if splashing is possible.
- Skin protection** : Use protective clothing that provides comprehensive protection against the chemicals listed in Section 3. For hands, use impervious gloves. Materials such as rubber, nitrile rubber or Viton (fluorocarbon rubber) are recommended.
- Body protection** : Where extensive exposure to product is possible, use resistant coveralls, apron and boots to prevent contact.
- Respiratory protection** : If work process generates excessive quantities of vapor or dust, or exposures in excess of any PEL, wear an appropriate organic vapor respirator.
- Site safety equipment** : An eyewash station and safety shower should be made available in the immediate working area.

General hygiene precautions : Avoid contact with eyes, skin and clothing. Do not breathe vapors/dust. Do not eat, drink or smoke when using this product. Clean all equipment and clothing at end of each work shift.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: Liquid	Appearance	: Metallic black
Odor	: Characteristic	Odor threshold	: N/Av
pH	: N/Av	Specific gravity	: 1.7 – 1.8
Boiling point	: >392°F (>200°C)	Coefficient of water/oil distribution	: N/Av
Melting/Freezing point	: N/Av	Solubility in water	: Immiscible
Vapor pressure (mm Hg @ 20°C / 68°F)	: N/Av	Evaporation rate (n-Butyl acetate = 1)	: N/Av
Vapor density (Air = 1)	: N/Av	Volatiles (% by weight)	: N/Av
Volatile organic compounds (VOCs)	: 19.9 g/L, A+B, per ASTM D2369		
Decomposition temperature	: N/Av	Flammable Classification	: Not Flammable
Flash point	: >212°F (100°C)	Lower flammable limit (% by vol)	: Not available
Flash point method	: Setaflash closed	Upper flammable limit (% by vol)	: Not available
Auto-ignition temperature	: N/Av	Oxidizing properties	: None
Flame projection length	: Not available	Flashback observed	: Not available

Explosion data: Sensitivity to mechanical impact / static discharge
: Not expected to be sensitive to mechanical impact or static discharge.

Viscosity : Not available

SECTION 10 – REACTIVITY AND STABILITY INFORMATION

Reactivity : Product reacts with amines to form polymers. Heat is evolved by this reaction.

Stability and reactivity : Stable under the recommended storage and handling conditions prescribed.

Hazardous polymerization : Hazardous polymerization does not occur.

Conditions to avoid : Avoid prolonged exposure to heat.

Materials to avoid and incompatibility
: Oxidizing agents.

Hazardous decomposition products
: None known, refer to hazardous combustion products in Section 5.

SECTION 11 – TOXICOLOGICAL INFORMATION

Routes of Exposure : *Inhalation*: YES *Skin Absorption*: NO *Skin and Eyes*: Yes *Ingestion*: YES

Calculated Acute Toxicity Estimates for the Product

Inhalation : Not Available
Oral : 10,000 mg/kg
Dermal : 8,000 mg/kg

Toxicological data : See below for individual ingredient acute toxicity data.

Ingredients	LD50		
	LC50 (4 hr) Inhalation, rat	Oral, rat	Dermal, rabbit
Polymer: Bisphenol F + epichlorohydrin epoxy resin	N/Av	N/Av	N/Av
Polymer: Bisphenol A + epichlorohydrin epoxy resin	N/Av	11400mg/kg	> 23 500
Alkyl (C12-14) glycidyl ether	N/Av	17100 mg/kg	N/Av
1-Methyl-2-pyrrolidone	3.1 mg/L	3598 mg/kg	2000 mg/kg

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/eye irritation : Causes serious eye irritation.

- Respiratory or skin sensitization** : Contains a component which is known to cause skin sensitization reactions. Does not contain known respiratory sensitizers.
- Germ cell mutagenicity** : None known.
- Carcinogenic status** : No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.
- Reproductive toxicity** : Contains N-methylpyrrolidone, a known developmental toxin.
- Specific Target Organ Toxicity, Single Exposure** : None known.
- Specific Target Organ Toxicity, Repeated Exposure** : None known.
- Aspiration hazard** : None known.
- Other important hazards** : See Section 2 for additional information.

SECTION 12 – ECOLOGICAL INFORMATION

- Environmental effects** : The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.
- Important environmental characteristics** : N/Av
- Ecotoxicological** : No data is available on the product itself. Information on components is listed below.
- 1-Methyl-2-pyrrolidone (872-50-4)**


Test & Species	Results & Conditions
96 Hr LC50 Lepomis macrochirus	832 mg/L [static]
96 Hr LC50 Leuciscus idus	4000 mg/L [static]
96 Hr LC50 Pimephales promelas	1072 mg/L [static]
96 Hr LC50 Poecilia reticulata	1400 mg/L [static]
72 Hr EC50 Desmodemus subspicatus	>500 mg/L
48 Hr EC50 Daphnia magna	4897 mg/L


- Persistence and degradability** : Product is not expected to rapidly degrade.
- Bioaccumulative potential** : Not Available.
- Mobility in the soil** : Not Available
- PBT and vPvB assessment** : Not Available
- Other adverse effects** : Not Available

SECTION 13 – DISPOSAL CONSIDERATION

- Handling for disposal** : Handle waste according to recommendations in Section 7.
- Methods of disposal** : Dispose in accordance with all applicable federal, state, provincial and local regulations. Contact your local, state, provincial or federal environmental agency for specific rules.
- RCRA** : For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14 – TRANSPORTATION INFORMATION

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
TDG	UN 3082	Environmentally hazardous substance, liquid, n.o.s. (Contains: Bisphenol A-Epichlorohydrin polymer; Bisphenol F-Epichlorohydrin polymer)	9	III	

TDG Additional Information	None				
49 CFR/DOT	UN 3082	Environmentally hazardous substance, liquid, n.o.s. (Contains: Bisphenol A-Epichlorohydrin polymer; Bisphenol F-Epichlorohydrin polymer)	9	III	
49 CFR/DOT Additional Information	None				

Marine Pollutant : Yes

SECTION 15 – REGULATORY INFORMATION

Canadian Information:

This product has been classified according to the hazard criteria of the Hazardous Products Regulations (HPR). This SDS contains all of the information required by the HPR.

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on either the Domestic Substances List (DSL) or the Non-Domestic Substances List (NDSL).

US Federal Information:

TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.

CERCLA Reportable Quantity (RQ) (40 CFR 117.302): None reported.

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes:

Immediate (Acute) Health Hazard
Chronic Health Hazard.

Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SARA TITLE III: Sec. 313, Toxic Chemicals Notification, 40 CFR 372: This material is not subject to SARA notification requirements, since it does not contain any Toxic Chemical constituents above de minimus concentrations.

U.S. State Right To Know Laws

California Proposition 65: Warning! This product contains a chemical known to the State of California to cause reproductive/developmental effects.

Other State Right to Know Laws: N-Methylpyrrolidone [CAS# 872-50-4] (MA, NJ, PA).

SECTION 16 – OTHER INFORMATION

HMIS Rating : * - Chronic Hazard 0 - Minimal 1 – Slight 2 – Moderate 3 – Serious 4 – Severe
Health: *2 Flammability 1 Physical Hazard 0 PPE: Gloves, safety glasses

Legend : ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR: Code of Federal Regulations
DOT: Department of Transportation
DSL: Domestic Substances List
EPA: Environmental Protection Agency

GHS: Globally Harmonized System
HPR: Hazardous Products Regulations
IARC: International Agency for Research on Cancer
Inh: Inhalation
N/Av: Not Available
N/Ap: Not Applicable
NIOSH: National Institute of Occupational Safety and Health
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: Permissible exposure limit
RCRA: Resource Conservation and Recovery Act
SARA: Superfund Amendments and Reauthorization Act
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TSCA: Toxic Substance Control Act
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification System

Disclaimer of Liability

The Information presented herein is supplied as a guide to those who handle or use this product and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive. The manner and conditions of use and handling may involve other and additional considerations. Safe work practices must be employed when working with any materials. It is important that the end user makes a determination regarding the adequacy of the safety procedures employed during the use of this product.

No warranty of any kind is given or implied. ARDEX Americas will not be liable for any damages, losses, injuries or consequential damages which may result from the use or reliance on any information contained herein.

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SAFETY DATA SHEET

SECTION 1 – IDENTIFICATION

Product Identifiers

Product Name : **ARDEX MC™ RAPID Hardener (Part B)**
Code No. : 50036690
Trade Name/Synonyms : ARDEX MC RAPID Hardener
Material Use : Epoxy hardener for moisture barrier
Restrictions on Use : Use only as recommended in the product's Technical Data Sheet
Details of the Supplier

Manufacturer's name and address:

Supplier's name and address:



ARDEX Engineered Cements
400 Ardex Park Dr.
Aliquippa, PA 15001 USA

Refer to Manufacturer

Information Telephone No. : (724) 203-5000
Website Address : <http://www.ardexamericas.com>
24 Hr Emergency Telephone # : **CHEM-TEL: 1-800-255-3924 OR 1-813-248-0585 (call collect)**

SECTION 2 – HAZARDS IDENTIFICATION

GHS Classification per 29 CFR 1910.1200 (OSHA HCS 2012) and HPR (WHMIS 2015)

: Flammable Liquids, Category 4
Skin Corrosion/Irritation, Category 1A
Serious Eye Damage/Eye Irritation, Category 1
Acute Toxicity, Inhalation, Category 3
Acute Toxicity, Oral, Category 4
Acute Toxicity, Dermal, Category 4
Sensitization, Skin, Category 1
Sensitization, Respiratory, Category 1
Specific Target Organ Toxicity, Respiratory Irritation, Category 3
Specific Target Organ Toxicity, Narcotic Effects, Category 3

GHS Pictograms :



Signal Word :

Danger

Hazard Statements :

Combustible liquid.
Causes severe skin burns and eye damage.
Toxic if inhaled.
Harmful if swallowed.
Harmful in contact with skin.
May cause an allergic skin reaction.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause drowsiness or dizziness.
May cause respiratory irritation.

Precautionary Statements : Keep away from heat/open flames/hot surfaces. — No smoking. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/fume/gas/mist/vapours/spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. In case of inadequate ventilation wear respiratory protection. Do not eat, drink or smoke when using this product. Contaminated work clothing should be washed separately from other clothing/fabrics. Wash contaminated clothing before reuse. In case of fire: Use fire extinguishers suitable for Classes B, C, or E for extinction. Keep container tightly closed. Store locked up. Store in a well-ventilated place. Keep cool. Dispose of contents / container in accordance with federal, state, and local laws. Do not allow product to enter drains.

Hazards Not Otherwise Classified : None.

% Composition with unknown acute toxicity data
: 25% of this product consists of ingredients with unknown acute toxicity.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS #	% (by weight)
4-tert-Butylphenol	98-54-4	30.00 – 60.00
m-Xylene- α,α' -diamine	1477-55-0	30.00 – 60.00
Trimethylhexamethylenediamine	25620-58-0	10.00 – 30.00
2,4,6-Tri(dimethylaminomethyl)phenol	90-72-2	1.00 – 5.00
Benzyl alcohol	100-51-6	1.00 – 5.00
3-(Dimethylamino)-propylamine	109-55-7	0.10 – 1.00

The exact percentages of the ingredients are withheld as trade secrets.

SECTION 4 – FIRST AID MEASURES

General Information : Call a POISON CENTER or doctor/physician if you feel unwell.
Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Seek immediate medical attention.
Skin contact : Remove/Take off immediately all contaminated clothing. Wash/shower affected skin with gently flowing lukewarm water for at least 20 minutes. Seek immediate medical attention/advice.
Eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention.
Ingestion : Rinse mouth with water. Do NOT induce vomiting. Seek immediate medical attention/advice.
Notes for Physician : Treat symptomatically.

Signs and symptoms of short-term (acute) exposure

Inhalation : May cause severe irritation to the respiratory system producing coughing and difficulty breathing. Inhalation may cause an allergic respiratory reaction.
Skin : Causes burns if in contact with the skin. Contains components which are easily absorbed through the skin. Contact may cause an allergic skin reaction.
Eyes : Causes burns if in contact with the eyes.
Ingestion : May cause burns to the mouth, throat and digestive tract.

Effects of long-term (chronic) exposure

: Prolonged inhalation may cause adverse lung effects with symptoms including coughing and shortness of breath. Some individuals may experience a sensitization reaction of the skin or of the respiratory system after an initial exposure. Subsequent exposures may cause a hypersensitive skin reaction (rash, swelling) or asthma.

Indication of need for immediate medical attention or special treatment

: Difficulty breathing persists after removing the person to fresh air.

Any burn to the skin. Blue color of the skin (cyanotic) after exposure.
Any exposure to the eye which causes irritation.
Ingestion.

SECTION 5 – FIRE FIGHTING MEASURES

- Suitable extinguishing media** : Water spray, dry chemical, carbon dioxide, foam.
- Unsuitable extinguishing media** : High pressure water jet may spread the fire.
- Hazardous combustion products** : Carbon monoxide carbon dioxide, nitrogen oxides and/or low molecular weight hydrocarbons and amines.
- Fire hazards/conditions of flammability**
: Material is a combustible liquid. In a fire, this product will generate toxic vapors.
- Flammability classification (OSHA 29 CFR 1910.1200, WHMIS 2015)**
: Flammable liquid, Category 4
- Flash point** : > 169°F (>76°C) **Lower flammable limit (% by vol)** : Not available
- Flash point method** : Setflash closed cup **Upper flammable limit (% by vol)** : Not available
- Auto-ignition temperature** : N/Av **Oxidizing properties** : None
- Flame projection length** : Not available **Flashback observed** : Not available
- Explosion data: Sensitivity to mechanical impact / static discharge**
: Not expected to be sensitive to mechanical impact or static discharge at room temperature. Static discharge at > 76°C could ignite vapors.

Special fire-fighting procedures/equipment

- : Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame. After fires have been extinguished, carefully clean all equipment and surfaces exposed to fumes.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

- Personal precautions** : Corrosive! See Section 7 for safe handling procedures. Wear chemically resistant personal protective equipment during cleanup. Restrict access to area until completion of clean-up. All persons dealing with clean-up must be properly trained and wear the appropriate chemically protective equipment. Refer to Section 8 on this Safety Data Sheet, EXPOSURE CONTROLS / PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.
- Environmental precautions** : Do not allow product to enter waterways. Do not allow material to contaminate ground water system.
- Spill response / clean-up** : Ventilate area of release. Stop spill or leak at source if safely possible. Contain product with inert absorbent material, preventing it from entering sewer lines or waterways. Gather up spilled material and place in suitable container for later disposal (see Section 13). Notify the appropriate authorities as required.
- Prohibited materials** : Avoid strong oxidizing agents. Do not allow spilled material to mix with epoxy resins. Chemical reaction with epoxides causes polymerization and release of heat energy.
- Special spill response procedures** : If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8002). Outside of the U.S. call the emergency number listed in Section 1. US CERCLA Reportable quantity (RQ): None reported.

SECTION 7 – HANDLING AND STORAGE

- Safe handling procedures** : Corrosive! Do NOT get into eyes, on skin or on clothing. Do NOT breathe vapor. Do NOT swallow. Observe good hygiene standards. Do not eat, drink or smoke in the work area. Wash thoroughly after handling. Wear safety glasses, gloves, and protective clothing to prevent skin contact. Promptly remove any clothing that becomes contaminated. Clean

contaminated clothing before reuse. Keep container tightly closed. Use only with adequate ventilation.

- Storage requirements** : Store in a cool, dry, well-ventilated area. Store away from heat and open flame. Avoid storing in direct sunlight. Store in original container. Keep tightly closed when not in use. Do not reuse empty container without commercial cleaning or reconditioning.
- Incompatible materials** : See Section 10.
- Special packaging materials** : Always keep in containers made of the same materials as the supply container.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

- Ventilation and engineering measures:** Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits. Ventilation should effectively remove and prevent buildup of any vapor or mist generated from the handling of this product.
- Respiratory protection** : If work process generates excessive quantities of vapor or dust, or exposures in excess of any PEL, wear an appropriate organic vapor respirator.
- Skin protection** : Wear chemical resistant protective clothing and impervious gloves. Materials such as nitrile rubber or Viton (fluorocarbon rubber) are recommended.
- Eye / face protection** : Chemical goggles must be worn when using this product. A face shield is recommended if splashing is possible.
- Other protective equipment** : Where extensive exposure to product is possible, use resistant coveralls, apron and boots to prevent contact. An eyewash station and safety shower should be made available in the immediate working area.
- General hygiene considerations** : Avoid contact with eyes, skin and clothing. Do not breathe vapors/dust. Do not eat, drink or smoke when using this product. Clean all equipment and clothing at end of each work shift. Contaminated work clothing should be washed separately from other clothing/fabrics.

Permissible exposure levels :

Ingredients	CAS #	ACGIH TLV		OSHA PEL	
		TLV	STEL	PEL	STEL
4-tert-Butylphenol	98-54-4	N/Av	N/Av	N/Av	N/Av
1,3-Bis(aminomethyl)benzene	1477-55-0	0,1 mg/m ³ CEIL	N/Av	N/Av	0,1 mg/m ³ NIOSH REL CEIL
Trimethylhexamethylenediamine	25620-58-0	N/Av	N/Av	N/Av	N/Av
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	N/Av	N/Av	N/Av	N/Av
Benzyl alcohol	100-51-6	10 ppm WEEL	N/Av	10 ppm A1HA	N/Av
3-(Dimethylamino)-1-propylamine	109-55-7	N/Av	N/Av	N/Av	N/Av

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

- | | |
|--|--|
| Physical state : Liquid | Appearance : Yellowish |
| Odor : Amine | Odor threshold : N/Av |
| pH : Basic | Specific gravity : > 1.0 |
| Boiling point : >392°F (>200°C) | Coefficient of water/oil distribution : N/Av |
| Melting/Freezing point : N/Av | Solubility in water : Immiscible |
| Vapor pressure (mm Hg @ 20°C / 68°F) : N/Av | Evaporation rate (n-Butyl acetate = 1) : N/Av |
| Vapor density (Air = 1) : N/Av | Volatiles (% by weight) : N/Av |
| Volatile organic compounds (VOCs) : 19.9 g/L A+B per ASTM D2369 | |
| General information : N/Av | |
| Particle size : N/Av | Flammability properties : See Section 5. |

SECTION 10 – REACTIVITY AND STABILITY INFORMATION

- Stability and reactivity** : Stable under the recommended storage and handling conditions prescribed.

- Hazardous polymerization** : When handled according to the directions in the Technical Data Sheet, this product will chemically react with epoxy resin and will generate heat.
- Conditions to avoid** : Avoid prolonged exposure to heat.
- Materials to avoid and incompatibility** : Oxidizing agents.
- Hazardous decomposition products** : Refer to hazardous combustion products in Section 5.

SECTION 11 – TOXICOLOGICAL INFORMATION

Routes of Exposure : *Inhalation:* YES *Skin Absorption:* YES *Skin and Eyes:* Yes *Ingestion:* YES

Symptoms of acute overexposure : See Section 4.

Symptoms of chronic overexposure : See Section 4.

Calculated Acute Toxicity Estimates for the Product

Inhalation : 3.66 mg/L

Oral : 840 mg/kg

Dermal : 1174 mg/kg

Toxicological data : Based on individual components, this product is harmful if swallowed or in contact with the skin, and can be fatal if inhaled. Contains components that may be absorbed through the skin in harmful amounts. See below for individual ingredient acute toxicity data.

Ingredients	LD50 (4 hr)		
	Inhalation, rat	Oral, rat	Dermal, rabbit
4-tert-Butylphenol	N/Av	2928 mg/kg	2268 mg/kg
m-Xylene- α,α' -diamine	3.78 mg/L	980 mg/kg	2000 mg/kg
Trimethylhexamethylenediamine	N/Av	910 mg/kg	N/Av
2,4,6-Tri(dimethylaminomethyl)phenol	N/Av	2169 mg/kg	1280 mg/kg
Benzyl alcohol	4.178 mg/L	1230 mg/kg	2000 mg/kg
3-(Dimethylamino)-propylamine	>4.31 mg/L	1870 mg/kg	487 mg/kg

Corrosivity/ Irritation to the skin : Causes serious chemical burns to the skin.

Corrosivity/ Irritation to the eyes : Causes serious chemical burns to the eyes. May cause blindness.

Skin/Respiratory Sensitization : Contains multiple components which are known to cause skin sensitization reactions. Contains a component that may cause sensitization through inhalation.

Carcinogenic status : No components are listed as carcinogens by ACGIH, IARC, OSHA, NIOSH or NTP.

Teratogenicity : None known.

Reproductive effects : None known.

Germ Cell Mutagenicity : None known.

Epidemiology : Not available.

Target Organ Effects, Single exposure : Contains a component which causes respiratory irritation. Contains a component that causes Central Nervous System (CNS) effects such as headache, nausea, dizziness.

Target Organ Effects, Repeated exposure : Contains components which may be absorbed through the skin in harmful amounts, especially after repeated or prolonged exposure.

Risk of aspiration : None known.

Synergistic materials : N/Av

Other important hazards : See hazards listed in Section 2.

SECTION 12 – ECOLOGICAL INFORMATION

Environmental effects : The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.

Important environmental characteristics

: N/Av
Ecotoxicological : No data is available on the product itself. Information on components is listed below.

4-tert-Butylphenol (98-54-4)

Test & Species	Results & Conditions
96 Hr LC50 Pimephales promelas	4.71-5.62 mg/L [flow-through]
96 Hr LC50 Cyprinus carpio	6.9 mg/L [static]
72 Hr EC50 Desmodemus subspicatus	11.2 mg/L
48 Hr EC50 Daphnia magna	3.9 mg/L
48 Hr EC50 Daphnia magna	3.4 - 4.5 mg/L [Static]

Trimethylhexamethylenediamine (25620-58-0)

Test & Species	Results & Conditions
48 Hr LC50 Leuciscus idus	172 mg/L [static]
72 Hr EC50 Desmodemus subspicatus	29.5 mg/L
24 Hr EC50 Daphnia magna	31.5 mg/L

M-Xylene- α,α' -diamine -(1477-55-0)

96 Hr LC50 Oncorhynchus mykiss	> 100 mg/L
48 Hr EC50 Daphnia magna	16 mg/L

Benzyl alcohol (100-51-6)

Test & Species	Results & Conditions
96 Hr LC50 Pimephales promelas	460 mg/L [static]
96 Hr LC50 Lepomis macrochirus	10 mg/L [static]
3 Hr EC50 Anabaena variabilis	35 mg/L
48 Hr EC50 water flea	23 mg/L

3-(Dimethylamino)-propylamine (109-55-7)

Test & Species	Results & Conditions
96 Hr LC50 Leuciscus idus	122 mg/L [static]
72 Hr EC50 Desmodemus subspicatus	56.2 mg/L
96 Hr EC50 Desmodemus subspicatus	57.5 mg/L
48 Hr EC50 Daphnia magna	59.5 mg/L

- Biodegradability** : No data available.
- Bioaccumulative potential** : No data available.
- Mobility in soil** : No data available.
- PBT and vPvB assessment** : No data available.
- Other adverse effects** : No data available.

Other Adverse Effects



Material is highly alkaline and should not be discharged into sewers or waterways.

SECTION 13 – DISPOSAL CONSIDERATION

- Handling for disposal** : Handle waste according to recommendations in Section 7.
- Methods of disposal** : Material, if discarded, is expected to be a D002 Corrosive Waste. You must test your waste using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes. Dispose in accordance with all applicable federal, state, provincial and local regulations. Contact your local, state, provincial or federal environmental agency for specific rules.
- Disposal Information** : Waste must be handled in accordance with all local regulations. In case of large spills, follow all facility Emergency Response Procedures. Do not allow this material to enter into sewers/water supplies. Do not reuse containers. Dispose of container and any unused contents in accordance with local regulations.
- RCRA** : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method.

For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14 – TRANSPORTATION INFORMATION

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
TDG	UN 1760	Corrosive liquids, n.o.s. (Contains: m-Xylene- α , α' -diamine, Trimethylhexamethylenediamine)	8	III	
TDG Additional Information	None				
49 CFR/DOT	UN 1760	Corrosive liquids, n.o.s. (Contains: m-Xylene- α , α' -diamine, Trimethylhexamethylenediamine)	8	III	
49 CFR/DOT Additional Information	Material is also classified as a combustible liquid with a flashpoint >169°F (>76°C).				

SECTION 15 – REGULATORY INFORMATION

Canadian Information:

This product has been classified according to the hazard criteria of the Hazardous Products Regulations (HPR). This SDS contains all of the information required by the HPR.

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on either the Domestic Substances List (DSL) or the Non- Domestic Substances List (NDSL).

US Federal Information:

TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.

CERCLA Reportable Quantity (RQ) (40 CFR 117.302): None reported.

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes:

- Immediate (Acute) Health Hazard
- Chronic Health Hazard
- Fire Hazard.

Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SARA TITLE III: Sec. 313, Toxic Chemicals Notification, 40 CFR 372: This material is not subject to SARA notification requirements, since it does not contain any Toxic Chemical constituents above de minimus concentrations.

U.S. State Right To Know Laws

California Proposition 65: This product does not contain any chemicals known to the State of California to cause cancer and/or reproductive effects.

Other State Right to Know Laws:

Component	CAS	CA	MA	MN	NJ	NY	PA	RI
4-tert-Butylphenol	98-54-4	No	No	Yes	No	No	No	No
1,3-Bis(aminomethyl)benzene	1477-55-0	Yes	Yes	No	Yes	No	Yes	Yes
Trimethylhexamethylenediamine	25620-58-0	No	No	No	Yes	No	No	No

2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	No	No	No	No	No	No	No
Benzyl alcohol	100-51-6	No	Yes	No	No	No	Yes	No
3-(Dimethylamino)-1-propylamine	109-55-7	No	Yes	Yes	Yes	No	Yes	No

SECTION 16 – OTHER INFORMATION

HMIS Rating : * - Chronic Hazard 0 - Minimal 1 – Slight 2 – Moderate 3 – Serious 4 – Severe
*Health: *3 Flammability 2 Physical Hazard 0*
 Recommended PPE: Gloves, safety glasses with side shields, protective clothing

Legend : ACGIH: American Conference of Governmental Industrial Hygienists
 CAS: Chemical Abstract Services
 CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
 CFR: Code of Federal Regulations
 DOT: Department of Transportation
 DSL: Domestic Substances List
 EPA: Environmental Protection Agency
 GHS: Globally Harmonized System
 HPA: Hazardous Products Regulations
 IARC: International Agency for Research on Cancer
 Inh: Inhalation
 N/Av: Not Available
 N/Ap: Not Applicable
 NIOSH: National Institute of Occupational Safety and Health
 NTP: National Toxicology Program
 OSHA: Occupational Safety and Health Administration
 PEL: Permissible exposure limit
 RCRA: Resource Conservation and Recovery Act
 SARA: Superfund Amendments and Reauthorization Act
 STEL: Short Term Exposure Limit
 TDG: Canadian Transportation of Dangerous Goods Act & Regulations
 TLV: Threshold Limit Values
 TSCA: Toxic Substance Control Act
 TWA: Time Weighted Average
 WHMIS: Workplace Hazardous Materials Identification System

Disclaimer of Liability

The Information presented herein is supplied as a guide to those who handle or use this product and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive. The manner and conditions of use and handling may involve other and additional considerations. Safe work practices must be employed when working with any materials. It is important that the end user makes a determination regarding the adequacy of the safety procedures employed during the use of this product. No warranty of any kind is given or implied. ARDEX Engineered Cements will not be liable for any damages, losses, injuries or consequential damages which may result from the use or reliance on any information contained herein.

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