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:

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

Supplier's name and address:

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 not be allowed out of the workplace.
Wash contaminated clothing before reuse.
In case of fire: Use fire extinguishers suitable for Classes B, C, or E for extinction.
Call a POISON CENTER or doctor/physician if you feel unwell.
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 without available 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	: Setaflash 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).

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 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 not be allowed out of the workplace.

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
m-Xylene-α,α'-diamine	1477-55-0	0.1 mg/m^3 CEIL	N/Av	0.1 mg/m^3 CEIL	N/Av
Trimethylhexamethylenediamine	25620-58-0	N/Av	N/Av	N/Av	N/Av
2,4,6-Tri(dimethylaminomethyl)phenol	90-72-2	N/Av	N/Av	N/Av	N/Av
Benzyl alcohol	100-51-6	N/Av	N/Av	10 ppm TLV N/Av 44.2 mg/m^3 (AIHA)	
3-(Dimethylamino)-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 incompatability

: 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.

	LC50 (4 hr)	LD50	
Ingredients	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

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

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

Reproductive effects : None known.

Teratogenicity : None known.

Mutagenicity : None known.

Epidemiology : Not available.

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

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

Synergistic materials : N/Av

Irritancy/Corrosivity : Corrosive.

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 Desmodesmus 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 Desmodesmus 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 Oncorhyncus 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 Desmodesmus subspicatus	56.2 mg/L
96 Hr EC50 Desmodesmus 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	PA	RI
m-Xylene-α, α'-diamine	1477-55-0	Yes	Yes	Yes	Yes	Yes	Yes
Trimethylhexamethylenediamine	25620-58-0	No	No	No	Yes	No	No
Benzyl alcohol	100-51-6	No	Yes	Yes	No	Yes	No
3-(Dimethylamino)-propylamine	109-55-7	No	Yes	No	Yes	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.
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