

## MATERIAL SAFETY DATA SHEET

### SECTION 1 – IDENTIFICATION

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: 1-800255-3924 OR 1-813-248-0585 (call collect)  
Product Identifier : **ARDEX MC™ RAPID Resin (Part A)**  
Chemical Name : N/Ap                      Chemical Family : Mixture  
Chemical Formula : N/Ap                      Trade Name/Synonyms : ARDEX MC RAPID Resin  
Molecular Weight : N/Ap                      Material Use : Epoxy resin for moisture barrier

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

### SECTION 2 – HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW** : **WARNING! Skin and eye irritant. May cause an allergic skin reaction. Contains epoxy constituents.**

Avoid contact with eyes, skin and clothing. Avoid breathing vapors or dust. Avoid prolonged contact with skin. Wash thoroughly after handling. Keep container tightly closed. Use only with adequate ventilation.

Material Description : Metallic black liquid with a characteristic odor.

OSHA Classification : This material is classified as hazardous under OSHA regulations (29 CFR Part 1910.1200).

WHMIS Classification : Class D2B (Materials Causing Other Toxic Effects, Toxic Material).

#### **POTENTIAL HEALTH EFFECTS**

**Target organs** : Eyes; Skin.

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

#### **Signs and symptoms of short-term (acute) exposure**

*Inhalation* : Inhalation of vapors may irritate the respiratory system. Symptoms may include coughing and shortness of breath.

*Skin* : Causes irritation. Symptoms may include redness and itching. 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).

#### **Conditions aggravated by overexposure**

: Pre-existing skin, eye, and respiratory disorders.

**Carcinogenic status** : See TOXICOLOGICAL INFORMATION, Section 11.

**Additional health hazards** : May cause skin sensitization. See TOXICOLOGICAL INFORMATION, Section 11.

**Potential environmental effects** : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. See ECOLOGICAL INFORMATION, Section 12.

### SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS #	% (by weight)	ACGIH TLV		OSHA PEL	
			TWA	STEL	PEL	STEL
Hematite	1317-60-8	30.00 – 60.00	N/Av	N/Av	N/Av	N/Av
Phenol, 2,2'-methylenebis-, polymer with (chloromethyl)oxirane	55492-52-9	10.00 – 30.00	N/Av	N/Av	N/Av	N/Av
2,2-bis(4-hydroxyphenyl)propane, polymer with (chloromethyl)oxirane	25068-38-6	10.00 – 30.00	N/Av	N/Av	N/Av	N/Av
Alkyl (C12-14) glycidyl ether	68609-97-2	5.00 – 10.00	N/Av	N/Av	N/Av	N/Av
1-Methyl-2-pyrrolidone	872-50-4	0.10 – 1.00	N/Av 10 ppm (USA WEEL)	N/Av	N/Av	N/Av
Diisobutylketone	108-83-8	0.10 – 1.00	25 ppm	N/Av	25 ppm, 150 mg/m <sup>3</sup>	N/Av

### SECTION 4 – FIRST AID MEASURES

**Inhalation** : If inhaled, move to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If not breathing, clear airway and start artificial respiration. Seek immediate medical attention/advice.

**Skin contact** : Remove/Take off immediately all contaminated clothing. Flush affected skin with gently flowing lukewarm water for at least 20 minutes. Seek immediate medical attention/advice.

**Eye contact** : Immediately flush eyes thoroughly with running water for at least 20 to 30 minutes. Seek immediate medical attention/advice.

**Ingestion** : Never give anything by mouth to an unconscious person. Rinse mouth with water. Do NOT induce vomiting. Have victim drink one to two glasses of water. Seek immediate medical attention/advice.

**Notes for Physician** : Treat symptomatically.

### SECTION 5 – FIRE FIGHTING MEASURES

**Fire hazards/conditions of flammability**

: Not flammable under normal conditions of use. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.

**Flammability classification (OSHA 29 CFR 1910.1200)**

: Not flammable

**Flash point**

: >212°F (100°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.

**Suitable extinguishing media**

: Use extinguishing media appropriate for surrounding materials.

**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.

Hazardous combustion products : Carbon oxides and/or low molecular weight hydrocarbons.

## 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. 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 hardeners or amines. Chemical reaction with amines 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** : 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** : 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** : Under normal conditions of use, respiratory protection should not be necessary. 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.
- Permissible exposure levels** : For individual ingredient exposure levels, see Section 3.

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state</b>	: Liquid	<b>Appearance</b>	: Metallic black
<b>Odor</b>	: Characteristic	<b>Odor threshold</b>	: N/Av
<b>pH</b>	: N/Av	<b>Specific gravity</b>	: 1.7 – 1.8
<b>Boiling point</b>	: >392°F (>200°C)	<b>Coefficient of water/oil distribution</b>	: N/Av
<b>Melting/Freezing point</b>	: N/Av	<b>Solubility in water</b>	: Immiscible
<b>Vapor pressure (mm Hg @ 20°C / 68°F)</b>	: N/Av	<b>Evaporation rate (n-Butyl acetate = 1)</b>	: N/Av
<b>Vapor density (Air = 1)</b>	: N/Av	<b>Volatiles (% by weight)</b>	: N/Av
<b>Volatile organic compounds (VOCs)</b>	: N/Av	<b>General information</b>	: N/Av
<b>Particle size</b>	: N/Av	<b>Flammability properties</b>	: See Section 5.

## SECTION 10 – REACTIVITY AND STABILITY INFORMATION

- 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

- Toxicological data** : There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.

Ingredients	LC50 (4 hr) Inhalation, rat	LD50	
		Oral, rat	Dermal, rabbit
Phenol, 2,2'-methylenebis-, polymer with (chloromethyl)oxirane	N/Av	N/Av	N/Av
2,2-bis(4-hydroxyphenyl)propane, polymer with (chloromethyl)oxirane	N/Av	11400mg/kg	N/Av

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
Diisobutylketone	> 2300 ppm	5750 mg/kg	16000 mg/kg

- Carcinogenic status** : No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP. This product contains Hematite, which was found to be Not Classifiable as to its carcinogenicity due to limited evidence (IARC Group 3). The studies cited by IARC were limited to exposure by inhalation, which is not a likely exposure route with this product.
- Reproductive effects** : Contains N-methylpyrrolidone, a known developmental toxin.
- Teratogenicity** : None known.
- Mutagenicity** : None known.
- Epidemiology** : Not available.
- Sensitization to material** : Contains multiple components which are known to cause sensitization reactions.
- Synergistic materials** : N/Av
- Irritancy** : Slightly to Moderately irritating.
- 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.

**Diisobutylketone (108-83-8)**

**Test & Species**

**Results & Conditions**

96 Hr LC50 Oncorhynchus mykiss

140 mg/L [semi-static]

96 Hr EC50 Pseudokirchneriella subcapitata

100 mg/L

**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 & Degradability**

Product is not expected to rapidly degrade.



## SECTION 13 – DISPOSAL CONSIDERATION

- Handling for disposal** : Handle waste according to recommendations in Section 7.

**Methods of disposal** : Material, if discarded, is not expected to be a characteristic hazardous waste under RCRA. 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.

**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 3082	Environmentally hazardous substances, liquid, n.o.s. (Contains: Bisphenol A - Epichlorohydrin polymer , Phenol, 2,2'-methylenebis-, polymer with (chloromethyl)oxirane)	9	III	
TDG Additional Information	None				
49 CFR/DOT	UN 3082	Environmentally hazardous substances, liquid, n.o.s. (Contains: Bisphenol A - Epichlorohydrin polymer , Phenol, 2,2'-methylenebis-, polymer with (chloromethyl)oxirane)	9	III	
49 CFR/DOT Additional Information	None				

## SECTION 15 – REGULATORY INFORMATION

**Canadian Information:**

Canadian WHMIS Classification: This product is a WHMIS Controlled Product. It meets one or more of the criteria for a controlled product provided in Part IV of the Controlled Products Regulations (CPR). Refer to Section 2 for a WHMIS Classification for this product.

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on either the Domestic Substances List (DSL) or the Non- Domestic Substances List (NDSL). It contains no components above the *de minimus* level on the Canadian HPA Ingredient Disclosure List.

**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. 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: Diisobutylketone [CAS# 108-83-8] (CA, MA, MN, NJ, PA, RI); N-Methylpyrrolidone [CAS# 872-50-4] (MA, NJ, PA).

## SECTION 16 – OTHER INFORMATION

**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
- 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

**References**

- : 1. ACGIH, Threshold Limit Values and Biological Exposure Indices for 2012.
- 2. International Agency for Research on Cancer Monographs, searched 2012.
- 3. Canadian Centre for Occupational Health and Safety, CInfoWeb databases, 2012 (Chempendium and RTECs).
- 4. Material Safety Data Sheet from manufacturer.
- 5. US EPA Title III List of Lists - July 2012 version.
- 6. California Proposition 65 List - July 05, 2013 version

### 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. This Material Safety Data Sheet is valid for three (3) years.

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