

SAFETY DATA SHEET

SECTION 1 – IDENTIFICATION

Product Identifier : **ARDEX WA™ RESIN (Part A) Epoxy Grout and Adhesive**
Product ID Number : 70046441
Chemical Family : Mixture
Trade Name/Synonyms : ARDEX WA Resin
Material Use : High Performance, 100% Solids epoxy grout and adhesive.
Uses Advised Against : Use only as recommended in the product's Technical Data Sheet.

Manufacturer's name and address:

Supplier's name and address:



ARDEX L.P.
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)

: 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 : Avoid breathing vapors or dust. 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. Dispose of contents / container in accordance with federal, state, and local laws. Do not allow product to enter drains.

During normal usage of the product as recommended, airborne dusts and mists will not be present. See Section 7 (Handling and Storage) for further details.

Hazards Not Otherwise Identified : None

Unknown Acute Toxicity Content : 100% of the ingredients of this product have unknown acute toxicity by inhalation.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS #	% (by weight)
Crystalline Silica, Quartz	14808-60-7	30 – 60
Polymer: Bisphenol A + epichlorohydrin epoxy resin	25068-38-6	10 – 30
Alkyl (C12-14) glycidyl ether	68609-97-2	10 – 30
Polymer: Bisphenol F + epichlorohydrin	28064-14-4	5 – 10
Hydrophobic silica	67762-90-7	1 – 5
Note: the Asparagus color of ARDEX WA RESIN grout also contains the following pigment:		
Chromium (III) oxide	1308-38-9	5 - 10

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 or rash 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 irritation.
- Skin* : Causes irritation. Symptoms may include redness and itching.
- Eyes* : Causes irritation. Symptoms may include redness, itching, tearing 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**
- : Difficulty breathing continues after removing the affected person to fresh air.
Any contact with the eyes that causes irritation.
Ingestion.

SECTION 5 – FIRE FIGHTING MEASURES

- Suitable extinguishing media** : Water fog/mist, dry chemical, carbon dioxide, foam. Fight larger fires with water spray or alcohol resistant foam.
- Unsuitable extinguishing media** : High pressure water jet may spread the fire.
- Hazardous combustion products** : Carbon monoxide carbon dioxide, and other vapors and toxic gases.
- Fire hazards/conditions of flammability**
- : Not classified for flammability per GHS. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.
- 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 fog 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.
- Environmental Precautions**
- : Do not allow product to enter drains or contaminate ground water systems.

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 for additional information on acceptable personal protective equipment.
- Emergency procedures** : This product does not contain any chemicals that must be reported to the EPA in the event of a spill or release. For advice on chemical spills with this product, 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 dust or vapors 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.
Sanding and grinding dusts may be harmful if inhaled. When removing this product from existing installations (i.e. during a renovation), wear safety goggles and respiratory protection from dust due to blasting, chipping, or mechanically pulverizing.
- 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

- 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
Crystalline Silica, Quartz	14808-60-7	0.025 mg/m ³ (respirable fraction)	N/Av	0.05 mg/m ³ (respirable) (final rule limit)	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
Polymer: Bisphenol F + epichlorohydrin	28064-14-4	N/Av	N/Av	N/Av	N/Av
Hydrophobic silica	67762-90-7	10 mg/m ³ (total dust); 3 mg/m ³ (respirable)	N/Av	6 mg/m ³ (NIOSH)	N/Av

Note: the Asparagus color of ARDEX WA grout RESIN also contains the following pigment:			
Chromium (III) oxide	1308-38-9	0.5 mg/m ³ N/Av (measured as Cr)	0.5 mg/m ³ N/Av (measured as Cr)

- 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 generated from the handling of this product.
- Eye / face protection** : Safety glasses must be worn when using this product.
- Hand protection** : Wear impervious gloves. Materials such as nitrile rubber or Viton (fluorocarbon rubber) are recommended. Refer to glove manufacturer for breakthrough time for the chemicals in this product. (See Section 3.)
- 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 | : Paste | Appearance | : White Paste* |
| Odor | : Characteristic | Odor threshold | : N/Av |
| pH | : 8 (diluted) | Specific gravity | : 1.52 |
| Boiling point | : N/Av | Coefficient of water/oil distribution | : N/Av |
| Melting/Freezing point | : N/Av | Solubility in water | : slight |
| 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) | : 2.67 g/L A+B, ASTM D2369 | | |
| Decomposition temperature | : N/Av | Flammable Classification | : Not Flammable |
| Flash point | : >390°F (>199°C) | Lower flammable limit (% by vol) | : Not available |
| Flash point method | : Setflash closed | Upper flammable limit (% by vol) | : Not available |
| Auto-ignition temperature | : Not available | 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

*Note: Appearance for Asparagus color of ARDEX WA RESIN is Green Paste.

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

Signs and symptoms of exposure

: See Section 4.

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	Cas No.	LC50 (4 hr) Inhalation, rat	LD50, mg/kg Oral, rat	LD50, mg/kg Dermal, rabbit
Crystalline Silica, Quartz	14808-60-7	N/Av	N/Av	N/Av
Polymer: Bisphenol A + epichlorohydrin epoxy resin	25068-38-6	N/Av	11400	> 23500
Alkyl (C12-14) glycidyl ether	68609-97-2	N/Av	17100	N/Av
Polymer: Bisphenol F + epichlorohydrin	28064-14-4	N/Av	>5 000	> 2 000
Hydrophobic silica	67762-90-7	N/Av	> 1000 (Max dose in study)	> 2000
For the Asparagus color only:				
Chromium (III) oxide	1308-38-9	> 5.41 mg/L	>5000 mg/kg	N/Av

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 : Contains crystalline silica, or quartz, which is listed as a carcinogen via inhalation by IARC (Group 1), ACGIH (Group A2), NTP (Group 1) and OSHA (OSHA Select carcinogen). The crystalline silica is inextricably bound into the paste and cannot become airborne under normal conditions of use. See Section 7 for more information.
Reproductive toxicity : None known.
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.
Persistence and degradability : Not Available.
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.
- Containers** : Treat contaminated containers in the same manner as the product.
- 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	This product ships as a Limited Quantity per TDGR 1.17.				
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	This product ships as a Limited Quantity per 49 CFR 173.155 (b).				

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 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: See product label for information regarding Proposition 65.

Other State Right to Know Laws: The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	NY	PA	RI
Crystalline Silica, Quartz	14808-60-7	No	YES	YES	YES	No	YES	YES
Chromium (III) oxide (Only in the Asparagus color)	1308-38-9	No	YES	No	YES	No	No	No

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 determines the adequacy of the safety procedures employed during the use of this product. No warranty of any kind is given or implied. ARDEX L.P. 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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End of Document

SAFETY DATA SHEET

SECTION 1 – IDENTIFICATION

Product Identifier : **ARDEX WA™ Part B (Hardener)**
Product Code Number : 70046450
Trade Name/Synonyms : ARDEX WA Hardener
Material Use : High-Performance, 100% Solids Epoxy Grout and Adhesive.
Uses Advised Against : Use only as recommended in the product's Technical Data Sheet.

Manufacturer's name and address: **Supplier's name and address**
Same as manufacturer.



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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)

: Skin Corrosion/Irritation, 1
Eye Corrosion/Irritation, 1
Skin Sensitization, 1

GHS Pictograms :



Signal Word : Danger

Hazard Statements : Causes severe skin burns and eye damage.
May cause an allergic skin reaction.

Precautionary Statements Do not breathe dust/vapors. Wear protective gloves/protective clothing/eye protection. Wash hands and exposed skin thoroughly after handling. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not subject to grinding. Store locked up. Dispose of contents / container in accordance with federal, state, and local laws. Do not allow product to enter drains.

Under normal conditions of use, this product will not generate airborne dust. Avoid operations such as grinding, sanding or sawing that produce airborne dust.

Hazards Not Otherwise Specified : None.

% Unknown acute toxicity : 90% by weight of this product consists of ingredients with unknown acute inhalation toxicity. 60% by weight of this product consists of ingredients with unknown acute oral and dermal toxicities.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS #	% (by weight)
Crystalline silica, quartz	14808-60-7	60 – 100
Triethylenetetramine	112-24-3	10 – 30
Polyamide resin	68410-23-1	1 – 5
Hydrophobic silica	67762-90-7	1 – 5
Aminoalkoxysilane	1760-24-3	1 – 5
Isophoronediamine	2855-13-2	1 – 5
This product contains one or more of the following pigments:		
Titanium dioxide, TiO ₂	13463-67-7	< 20
Chromium (III) oxide, Cr ₂ O ₃	1308-38-9	< 0.5
Iron (III) oxide, Fe ₂ O ₃	1309-37-1	< 5
Iron (II-III) oxide, Fe ₃ O ₄	1317-61-9	< 1.0
Carbon Black	1333-86-4	< 5
Yellow Iron (III) oxide, Fe ₂ O ₃ ·H ₂ O	51274-00-1	< 5
Sodium aluminosulphosilicate	57455-37-5	< 1.0
Barium sulfate, BaSO ₄	7727-43-7	< 20

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

SECTION 4 – FIRST AID MEASURES

- General : IF exposed or concerned: Get medical advice/attention.
- Inhalation : Remove the person to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
- Skin contact : Remove/Take off immediately all contaminated clothing. Rinse SKIN with soap and water/shower. IF SKIN irritation or rash occurs, get medical advice/attention.
- Eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.
- Ingestion : Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell.
- Notes for Physician : Treat symptomatically.

Signs and symptoms of short-term (acute) exposure

- Inhalation* : Symptoms may include coughing or irritation.
- Skin* : Direct skin contact may cause skin burns.
- Eyes* : Direct contact to the eyes can cause chemical burns, corneal damage, and possibly blindness. Exposure to low vapor concentrations may cause swelling (edema) of the eyes, resulting in blurring of vision with a bluish haze and/or appearance of halos around lights.
- Ingestion* : May cause severe irritation and corrosive damage in the mouth, throat and stomach. Symptoms may include abdominal pain, vomiting, burns, and bleeding.

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

- : Difficulty breathing persists after removing the person to fresh air.
Any exposure to the eye which causes irritation.
Chemical burns to the skin. Blue color of the skin (cyanotic) after exposure.
Ingestion.

SECTION 5 – FIRE FIGHTING MEASURES

- Suitable extinguishing media** : Water fog/mist, dry chemical, carbon dioxide, foam. Fight larger fires with water spray or alcohol resistant foam.
- Unsuitable extinguishing media** : High pressure water jet may spread the fire.

Hazardous combustion products : Carbon monoxide carbon dioxide, nitrogen oxides and other vapors and toxic gases.

Fire hazards/conditions of flammability

: Not classified for flammability per GHS. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.

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 fog 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.

Environmental Precautions

: Do not allow product to enter drains or contaminate ground water systems.

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 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.) Residual material can be cleaned up with warm, soapy water. Notify the appropriate authorities as required.

Prohibited materials

: Avoid strong oxidizing agents and isocyanates. Do not allow spilled material to mix with epoxy resins. Chemical reaction with epoxy resins causes polymerization and release of heat energy.

Special spill response procedures

: This product does not contain any chemicals that must be reported to the EPA in the event of a spill or release. For advice on chemical spills with this product, 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. Observe good hygiene standards. Wash thoroughly after handling. Sanding and grinding dusts may be harmful if inhaled. When removing this product from existing installations (i.e. during a renovation), wear safety goggles and respiratory protection from dust due to blasting, chipping, or mechanically pulverizing. Wear protective clothing to prevent skin contact. Promptly remove any clothing that becomes contaminated. Clean contaminated clothing before reuse.

Storage requirements

: Store locked up. 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

Permissible exposure levels

: No exposure limit has been established for the product itself. The following are the exposure limits for the product components.

Ingredients	CAS #	ACGIH TLV		OSHA PEL	
		TLV	STEL	PEL	STEL
Crystalline silica, quartz	14808-60-7	0.025 mg/m ³	N/Av	0.05 mg/m ³ (respirable)	N/Av

		(respirable fraction)		(final rule limit)	
Triethylenetetramine	112-24-3	1 ppm (skin)	N/Av	N/Av	N/Av
Polyamide resin	68410-23-1	N/Av	N/Av	N/Av	N/Av
Hydrophobic silica	67762-90-7	10 mg/m ³ (total dust); 3 mg/m ³ (respirable)	N/Av	6 mg/m ³ NIOSH	N/Av
Aminoalkoxysilane	1760-24-3	N/Av	N/Av	N/Av	N/Av
Isophoronediamine	2855-13-2	N/Av	N/Av	N/Av	N/Av
This product contains one or more of the following pigments:					
Titanium dioxide, TiO ₂	13463-67-7	10 mg/m ³	N/Av	15 mg/m ³	N/Av
Chromium (III) oxide, Cr ₂ O ₃	1308-38-9	0.5 mg/m ³	N/Av	0.5 mg/m ³	N/Av
Iron (III) oxide, Fe ₂ O ₃	1309-37-1	5 mg/m ³ (respirable fraction)	N/Av	10 mg/m ³ (fume)	N/Av
Iron (II-III) oxide, Fe ₃ O ₄	1317-61-9	N/Av	N/Av	N/Av	N/Av
Carbon Black	1333-86-4	3.0 mg/m ³ (inhalable)	N/Av	3.5 mg/m ³	N/Av
Yellow Iron (III) oxide, Fe ₂ O ₃ ·H ₂ O	51274-00-1	10 mg/m ³ (total) 3 mg/m ³ (respirable)	N/Av	15 mg/m ³ (total) 5 mg/m ³ (respirable)	N/Av
Sodium aluminosulphosilicate	57455-37-5	15 mg/m ³ (total) 5 mg/m ³ (respirable)	N/Av	N/Av	N/Av
Barium sulfate, BaSO ₄	7727-43-7	10 mg/m ³ (total)	N/Av	15 mg/m ³ (total) 5 mg/m ³ (respirable)	N/Av

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 generated from the handling of this product.

Personal Protection Equipment

Eye / face protection

: Safety glasses must be worn when using this product.

Hand protection

: Wear impervious gloves. Materials such as nitrile rubber or Viton (fluorocarbon rubber) are recommended. Refer to glove manufacturer for breakthrough time for the chemicals in this product. (See Section 3.)

Body protection

: Wear chemical resistant protective clothing. 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.

Other protective equipment

: 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.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: Liquid	Appearance	: Color varies with pigment
Odor	: Amine	Odor threshold	: N/Av
pH	: 11 - 13	Specific gravity	: 2.1
Boiling point	: N/Av	Coefficient of water/oil distribution	: N/Av
Melting/Freezing point	: N/Av	Solubility in water	: Not soluble
Vapor pressure (mm Hg @ 20°C / 68°F)	: N/Av		
Evaporation rate (n-Butyl acetate = 1)	: N/Av	Viscosity	: N/Av
Vapor density (Air = 1)	: N/Av	Volatiles (% by weight)	: N/Av
Volatile organic compounds (VOCs)	: 2.67 g/L A+B, ASTM D2369		

Flammability classification (OSHA 29 CFR 1910.1200)

: Non-flammable
Flash point : >100°C (>212°F) **Lower flammable limit (% by vol)** : N/Av
Flash point method : Setaflash closed cup **Upper flammable limit (% by vol)** : N/Av
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.

SECTION 10 – REACTIVITY AND STABILITY INFORMATION

Reactivity : Product is formulated to react with epoxides, forming a polymer. This reaction evolves heat.
Stability : Stable under the recommended storage and handling conditions prescribed.
Hazardous polymerization : Hazardous auto-polymerization does not occur.
Conditions to avoid : High temperatures.
Materials to avoid and incompatibility
: Oxidizing agents, isocyanates.
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
Symptoms of exposure : See Section 4.
Calculated Acute Toxicity Estimates for the Product
Inhalation : > 40 mg/L
Oral : > 6,000 mg/kg
Dermal : > 4,000 mg/kg
Toxicological data : See below for individual ingredient acute toxicity data.

Ingredients	CAS No.	LC50 (4 hr) Inhalation, rat, mg/L	LD50 Oral, rat mg/kg	Dermal, rabbit mg/kg
Crystalline silica, quartz	14808-60-7	N/Av	N/Av	N/Av
Triethylenetetramine	112-24-3	N/Av	2500	805
Polyamide resin	68410-23-1	N/Av	> 2000	> 2000
Hydrophobic silica	67762-90-7	N/Av	> 1000 (Max dose in study)	> 2000
Aminoalkoxysilane	1760-24-3	1.49 - 2.44 (1 hr)	2413	>2009 (rat)
Isophoronediamine	2855-13-2	> 5.01	1030	> 2000
Depending on the color, the product may contain one or more of the following pigments:				
Titanium dioxide, TiO ₂	13463-67-7	> 6.82	> 24,000	> 10,000
Chromium (III) oxide, Cr ₂ O ₃	1308-38-9	> 5.41	> 5,000	N/Av
Iron (III) oxide, Fe ₂ O ₃	1309-37-1	N/Av	> 5,000	5,500 (rat)
Iron (II-III) oxide, Fe ₃ O ₄	1317-61-9	N/Av	> 5,000	N/Av
Carbon Black	1333-86-4	6.75	> 15,400	> 3000
Yellow Iron (III) oxide, Fe ₂ O ₃ •H ₂ O	51274-00-1	N/Av	> 5,000	N/Av
Sodium aluminosulphosilicate	57455-37-5	N/Av	> 10,000	N/Av
Barium sulfate, BaSO ₄	7727-43-7	N/Av	> 15,000	N/Av

Repeated Dose Effects : None known.
Carcinogenic status : This product contains Crystalline silica (quartz), which is listed as a known human carcinogen (by inhalation) by IARC (Group 1) and NTP. Some colors contain Titanium dioxide and/or Carbon black. Titanium dioxide is suspected to be

carcinogenic by inhalation (IARC 2B). Carbon black is suspected to be carcinogenic by inhalation (IARC 2B) and classified as a carcinogen by NPT. Under normal conditions of use, this product will not produce airborne dust. Avoid operations such as grinding, sanding or sawing which will produce airborne dust. See Section 7 for more information.

- Reproductive Toxicity** : This product contains trace amounts of methanol (< 0.1%).
- Teratogenicity** : None known.
- Mutagenicity** : None known.
- Epidemiology** : Not available.
- Target Organ Effects** : None known.
- Sensitization to material** : Contains components which are known to cause skin sensitization reactions.
- Synergistic materials** : Not available.
- Irritancy/Corrosivity** : Corrosive to skin and eyes.
- 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.
- Ecotoxicological** : No data is available on the product itself.
 - Ecotoxicity** : No data available.
 - 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.

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 2735	Amines, liquid, corrosive, n.o.s. (Contains: Triethylenetetramine, Isophoronediamine)	8	II	
TDG Additional Information	This product ships as a Limited Quantity per TDGR 1.17.				
49 CFR/DOT	UN 2735	Amines, liquid, corrosive, n.o.s. (Contains: Triethylenetetramine, Isophoronediamine)	8	II	
49 CFR/DOT Additional Information	This product ships as a Limited Quantity per 49 CFR 173.154 (b).				

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 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 product 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: See product label for information regarding Proposition 65.

Other State Right to Know Laws:

Component	CAS	CA	MA	MN	NJ	NY	PA	RI
Crystalline silica, quartz	14808-60-7	No	Yes	Yes	Yes	No	Yes	Yes
Triethylenetetramine	112-24-3	No	Yes	No	Yes	No	Yes	No
Isophoronediamine	2855-13-2	No	No	Yes	Yes	No	No	No
Some colors may contain the following pigments:								
Titanium dioxide	13463-67-7	No	Yes	Yes	Yes	No	Yes	Yes
Chromium (III) Oxide, Cr2O3	1308-38-9	No	Yes	No	Yes	No	No	No
Iron (III) Oxide, Fe2O3	1309-37-1	Yes	Yes	No	Yes	No	Yes	Yes
Carbon Black	1333-86-4	Yes	Yes	Yes	Yes	No	Yes	Yes
Barium sulfate	7727-43-7	No	Yes	No	Yes	No	Yes	No

SECTION 16 – OTHER INFORMATION

HMIS Rating : * - Chronic Hazard 0 - Minimal 1 – Slight 2 – Moderate 3 – Serious 4 – Severe
Health: *2 Flammability 1 Physical Hazard 1 PPE: B
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 determines the adequacy of the safety procedures employed during the use of this product. No warranty of any kind is given or implied. ARDEX L.P. 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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