

SAFETY DATA SHEET

SECTION 1 – PRODUCT AND COMPANY 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 P 82™ ULTRA PRIME Hardener (Part B)
Chemical Name : N/Ap Chemical Family : Mixture
Chemical Formula` : N/Ap Trade Name/Synonyms : ARDEX P 82 Hardener
Molecular Weight : N/Ap Material Use : Epoxy hardener for primer

SECTION 2 – HAZARDS IDENTIFICATION

GHS Classification : Skin Sensitization 1
Eye Irritation 2A
Skin Irritation 2
STOT SE 3, Respiratory

WHMIS Classification : This material is a controlled product under the criteria specified in the Canadian Workplace Hazardous Materials Information System (WHMIS) Class D2B (Materials Causing Other Toxic Effects, Toxic Material).

Material Description : White liquid with amine odor.

GHS Pictograms :



Signal Word : Warning

Hazard Statements : Causes severe eye irritation.
Causes skin irritation.
May cause an allergic skin reaction.
May cause respiratory irritation.

Precautionary Statements : Do not get in eyes, on skin or on clothing. Avoid breathing vapor. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Clean contaminated clothing before reuse. Store in a well-ventilated place. Store in a closed container. Dispose of contents / container in accordance with federal, state, and local laws. Do not allow product to enter drains.

Hazards not otherwise classified : None.

% With Unknown Acute Toxicity : Up to 5% by weight of this product is comprised of ingredients with unknown acute dermal toxicity.

Up to 15% by weight of this product is comprised of ingredients with unknown acute inhalation toxicity.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS #	% (by weight)
Triethylenetetramine	112-24-3	1.00 – 5.00
Isophoronediamine	2855-13-2	1.00 – 5.00
Benzyl alcohol	100-51-6	1.00 – 5.00

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

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.
- Signs and symptoms of short-term (acute) exposure**
- Inhalation* : May cause irritation to the respiratory system producing coughing and difficulty breathing.
- Skin* : May cause irritation to skin, with redness, itching, and swelling. Contains components which are easily absorbed through the skin. Repeated or prolonged contact may cause an allergic skin reaction.
- Eyes* : Causes severe irritation to the eyes.
- Ingestion* : May cause irritation to the mouth, throat and digestive tract.

Effects of long-term (chronic) exposure

- : Prolonged inhalation of concentrated vapors can cause headaches, nausea, vomiting, and other symptoms of central nervous system (CNS) depression. 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.
Blue color of the skin (cyanotic) after exposure.
Ingestion.

SECTION 5 – FIRE FIGHTING MEASURES

- Suitable extinguishing media** : Use extinguishing media appropriate for surrounding materials.
- Hazardous combustion products** : Carbon monoxide, carbon dioxide, nitrogen oxides, and/or low molecular weight hydrocarbons and amines.
- 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) and WHMIS

: Nonflammable

SECTION 6 – ACCIDENTAL RELEASE MEASURES

- Personal precautions** : 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.
- Protective equipment** : Refer to Section 8 on this Safety Data Sheet, EXPOSURE CONTROLS / PERSONAL PROTECTION, for 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).
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** : See Section 13 for disposal information.

SECTION 7 – HANDLING AND STORAGE

- Safe handling procedures** : Avoid contact with eyes, skin or clothing. Avoid breathing vapors. 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

Permissible Exposure Limits : No exposure limits have been established for the product. Below are exposure limits for the components in the product.

Ingredients	CAS #	ACGIH TLV		OSHA PEL	
		TLV	STEL	PEL	STEL
Triethylenetetramine	112-24-3	N/Av	N/Av	N/Av	N/Av
				1 ppm US WEEL	
Isophoronediamine	2855-13-2	N/Av	N/Av	N/Av	N/Av
Benzyl alcohol	100-51-6	N/Av	N/Av	N/Av	N/Av
				10 ppm US WEEL	

- Engineering controls** : 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.
- Personal Protection Equipment**
- Eye / face protection** : Chemical goggles must be worn when using this product. A face shield is recommended if splashing is possible.

- Skin protection** : Wear chemical resistant protective clothing and impervious gloves. Materials such as 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 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

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|---|-----------------------------|---|--------------|
| Physical state | : Liquid | Appearance | : White |
| Odor | : Amine | Odor threshold | : N/Av |
| pH | : < 11.50 | Specific gravity | : 1.20 |
| Boiling point | : 212°F (100°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) | : A+B, 10.8 g/L, ASTM D2369 | | |
| Flammability classification | : Nonflammable | Decomposition temperature | : N/Av |
| Flash point | : >200°F (>93.3°C) | Lower flammable limit (% by vol) | : N/Av |
| Flash point method | : Setaflash closed | Upper flammable limit (% by vol) | : N/Av |
| Auto-ignition temperature | : N/Av | Oxidizing properties | : None |
| Flame projection length | : N/Av | Flashback observed | : N/Av |
- Explosion data: Sensitivity to mechanical impact / static discharge**
: Not expected to be sensitive to mechanical impact or static discharge.
- Viscosity** : N/Av

SECTION 10 – REACTIVITY AND STABILITY INFORMATION

- Stability** : Stable under the recommended storage and handling conditions prescribed.
- Reactivity** : Reacts with epoxides. Reaction releases heat.
- 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**
: 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 exposure** : See Section 4.
- Toxicological data** : There are no available data for the product itself, only for the ingredients. Based on individual components, this product is an irritant to skin and eyes, and can cause sensitization by skin contact. See below for individual ingredient acute toxicity data.

Ingredients	LC50 (4 hr) Inhalation, rat	LD50	
		Oral, rat	Dermal, rabbit
Triethylenetetramine	N/Av	2500 mg/kg	550 mg/kg

Isophoronediamine	N/Av	1030 mg/kg	N/Av
Benzyl alcohol	N/Av	1230 mg/kg	2000 mg/kg

- Skin corrosion or irritation** : Causes irritation to skin.
Serious eye damage / eye irritation : Causes severe irritation to eyes.
Respiratory or skin sensitization : Contains components which are known to cause skin sensitization reactions.
Germ cell mutagenicity : None known.
Carcinogenic status : No components are listed as carcinogens by ACGIH, IARC, OSHA, NIOSH or NTP.
Reproductive toxicity : None known.
Specific Target Organ Toxicity, Single Exposure : May cause respiratory irritation.
Specific Target Organ Toxicity, Repeated Exposure : None known.
Aspiration hazard : None known.
Additional information : N/Av

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. Information on components is listed below.

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 Daphnia magna	23 mg/L

Isophoronediamine (2855-13-2)

Test & Species	Results & Conditions
96 Hr LC50 Leuciscus idus	110 mg/L
72 Hr EC50 Desmodemus subspicatus	37 mg/L
48 Hr EC50 Daphnia magna	17.4 mg/L

- Persistence and degradability** : Not Available.
Bioaccumulative potential : Not Available.
Mobility in soil : Not Available.
PBT and VPVB assessments : Not Available.
Other Adverse Effects : Material is 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. Empty containers retain residue (liquid and vapor).
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.
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 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	None	Not regulated.	Not regulated.	None	
TDG Additional Information	None				
49 CFR/DOT	None	Not regulated.	Not regulated.	None	
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 the Domestic Substances List (DSL). It contains the following components on the Canadian HPA Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Triethylenetetramine	112-24-3	0.1 %
Benzyl alcohol	100-51-6	1 %
Isophoronediamine	2855-13-2	1 %

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: This product contains 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
Triethylenetetramine	112-24-3	No	Yes	No	Yes	Yes	No
Benzyl alcohol	100-51-6	No	Yes	Yes	No	Yes	No

Isophoronediamine	2855-13-2	No	No	Yes	Yes	No	No
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SECTION 16 – OTHER INFORMATION

HMIS Rating : * - Chronic Hazard 0 - Minimal 1 – Slight 2 – Moderate 3 – Serious 4 – Severe
*Health: *2 Flammability 0 Reactivity 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
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
WEEL: Workplace Environmental Exposure Level
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. This Material Safety Data Sheet is valid for three (3) years.

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