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: 1-800-255-3924 OR 1-813-248-0585 (call collect)
Product Identifier: ARDEX P 82 ULTRA PRIME - Resin (Part A)

Chemical Name: N/A
Chemical Family: Mixture
Chemical Formula: N/A
Trade Name/Synonyms: ARDEX P 82 Resin
Molecular Weight: N/A
Material Use: Epoxy resin for primer.
Uses Advised Against: No information available.

SECTION 2 – HAZARDS IDENTIFICATION

GHS Classification per 29 CFR 1910.1200 (OSHA HCS 2012) and HPR (WHMIS 2015)
- Skin sensitizer, Category 1.
- Eye irritant, Category 2B.
- Skin irritant, Category 2.
- Specific Target Organ Toxicity (Single Exposure) Category 3, Respiratory

GHS Pictograms: 

Signal Word: Warning

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

Precautionary Statements: Do not get in eyes, on skin or on clothing. Avoid breathing vapors or dust. Avoid prolonged contact with skin. Use outdoors or in well-ventilated area. If on skin, wash with soap and water. If skin irritation or rash occurs, get medical attention/advice. Wash thoroughly with soap and water after handling. Contaminated work clothes must not be allowed out of the workplace. Wash contaminated clothing before reuse. Keep container tightly closed. Store in a well-ventilated place. Store locked up. Dispose of contents/container according to local/regional/national regulations. Do not pour product down drains.

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

Hazards Not Otherwise Classified: None

% With Unknown Acute Toxicity: Up to 50% by weight of this product is comprised of ingredients with unknown acute inhalation toxicity.
SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS #</th>
<th>% (by weight)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone</td>
<td>1317-65-3</td>
<td>10.00 – 30.00</td>
</tr>
<tr>
<td>2,2-bis(4-hydroxyphenyl)propane, polymer with (chloromethyl)oxirane epoxy resin</td>
<td>25068-38-6</td>
<td>5.00 – 10.00</td>
</tr>
<tr>
<td>Aliphatic glycidyl ether</td>
<td>2461-15-6</td>
<td>1.00 – 5.00</td>
</tr>
<tr>
<td>Phenol, polymer with formaldehyde, glycidyl ether</td>
<td>28064-14-4</td>
<td>1.00 – 5.00</td>
</tr>
<tr>
<td>Crystalline silica</td>
<td>14808-60-7</td>
<td>0.10 – 1.00</td>
</tr>
</tbody>
</table>

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

SECTION 4 – FIRST AID MEASURES

General : Call a Poison Center or doctor if you feel unwell.
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 minor, temporary irritation to respiratory tract. Symptoms may include coughing and shortness of breath.
- Skin : May cause skin irritation. Symptoms may include redness and itching. Prolonged or repeated overexposure to dusts/vapors may cause skin sensitization.
- Eyes : Causes moderate irritation to eyes. Symptoms may include redness, itching, blurred vision or pain.
- Ingestion : Symptoms such as gastric pain, nausea, vomiting, and diarrhea may occur.

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.
- Blue color of the skin (cyanotic) after exposure.
- Ingestion.

SECTION 5 – FIRE FIGHTING MEASURES

Suitable extinguishing media : Carbon dioxide, dry chemical powder, appropriate foam or water fog.
Unsuitable extinguishing media : water jet
Hazardous combustion products : Carbon monoxide, carbon dioxide, and other toxic vapors and gases that are common to thermal degradation of organic compounds.
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.

Environmental precautions

Do not allow material to enter drains or contaminate ground water system.

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.


Not flammable

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions

IRRITANT. Restrict access to area until completion of clean-up. All persons dealing with clean-up should wear the appropriate chemically protective equipment.

Protective equipment

Refer to Section 8 on this Safety Data Sheet, EXPOSURE CONTROLS / PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.

Emergency Procedures

If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8002). Outside of the U.S. call the emergency number listed in Section 1.

US CERCLA Reportable quantity (RQ): None reported.

Methods and materials for containment and cleaning 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 of product, while still wet, can be cleaned up with warm soapy water. Notify the appropriate authorities as required.

Prohibited materials

Avoid strong oxidizing agents

Environmental precautions

Do not allow product to enter drains or waterways. Do not allow material to contaminate ground water system.

Reference to other sections

See Section 13 for disposal information.

SECTION 7 – HANDLING AND STORAGE

Safe handling procedures

IRRITANT. Observe good hygiene standards. Use only with adequate ventilation. 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. Sanding and grinding dusts may be harmful if inhaled. When removing this product from existing flooring (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. Keep container tightly closed.

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 itself. Below are exposure limits for the components in the product.
ARDEX P 82 RESIN (Part A)
27-Aug-2016

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS #</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TWA</td>
<td>STEL</td>
<td>PEL</td>
</tr>
<tr>
<td>Limestone</td>
<td>1317-65-3</td>
<td>N/Av</td>
<td>N/Av</td>
</tr>
<tr>
<td>2,2-bis(4-hydroxyphenyl)propane, polymer with (chloromethyl)oxirane epoxy resin</td>
<td>25068-38-6</td>
<td>N/Av</td>
<td>N/Av</td>
</tr>
<tr>
<td>Aliphatic glycidyl ether</td>
<td>2461-15-6</td>
<td>N/Av</td>
<td>N/Av</td>
</tr>
<tr>
<td>Phenol, polymer with formaldehyde, glycidyl ether</td>
<td>28064-14-4</td>
<td>N/Av</td>
<td>N/Av</td>
</tr>
<tr>
<td>Crystalline silica</td>
<td>14808-60-7</td>
<td>0.025 mg/m³ (respirable fraction)</td>
<td>N/Av</td>
</tr>
</tbody>
</table>

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. Additionally, 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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Pink liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Slight</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>N/A</td>
</tr>
<tr>
<td>pH</td>
<td>N/A</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1.17 – 1.20</td>
</tr>
<tr>
<td>Boiling point</td>
<td>212°F (100°C)</td>
</tr>
<tr>
<td>Coefficient of water/oil distribution</td>
<td>N/A</td>
</tr>
<tr>
<td>Melting/Freezing point</td>
<td>N/A</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Miscible</td>
</tr>
<tr>
<td>Vapor pressure (mm Hg @ 20°C / 68°F)</td>
<td>N/A</td>
</tr>
<tr>
<td>Evaporation rate (n-Butyl acetate = 1)</td>
<td>N/A</td>
</tr>
<tr>
<td>Vapor density (Air = 1)</td>
<td>N/A</td>
</tr>
<tr>
<td>Volatiles (% by weight)</td>
<td>35 - 40</td>
</tr>
<tr>
<td>Volatile organic compounds (VOCs)</td>
<td>5.5 g/L (A + B) ASTM D2369</td>
</tr>
<tr>
<td>Particle size</td>
<td>N/A</td>
</tr>
<tr>
<td>Flammability classification</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt;212°F (100°C)</td>
</tr>
<tr>
<td>Lower flammable limit (% by vol)</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash point method</td>
<td>Setaflash closed</td>
</tr>
<tr>
<td>Upper flammable limit (% by vol)</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>N/A</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>Not available</td>
</tr>
</tbody>
</table>

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

SECTION 10 – REACTIVITY AND STABILITY INFORMATION

Reactivity: Reacts with ammonia and amines. Reaction releases heat.

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

Hazardous reactions: Hazardous polymerization does not occur.
Conditions to avoid: High temperatures.
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
Symptoms of exposure: See Section 4.

Calculated Acute Toxicity Estimates for the Product

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>LC50 (4 hr) Inhalation, rat</th>
<th>LD50 Oral, rat</th>
<th>LD50 Dermal, rabbit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone</td>
<td>N/Av</td>
<td>6450 mg/kg</td>
<td>N/Av</td>
</tr>
<tr>
<td>2,2-bis(4- hydroxyphenyl)propane, polymer with (chloromethyl)oxirane</td>
<td>N/Av</td>
<td>13600 mg/kg</td>
<td>&gt; 6000 mg/kg</td>
</tr>
<tr>
<td>Aliphatic glycidyl ether</td>
<td>N/Av</td>
<td>7800 mg/kg</td>
<td>N/Av</td>
</tr>
<tr>
<td>Phenol, polymer with formaldehyde, glycidyl ether</td>
<td>N/Av</td>
<td>&gt; 5000 mg/kg</td>
<td>4000 mg/kg</td>
</tr>
<tr>
<td>Crystalline silica</td>
<td>N/Av</td>
<td>N/Av</td>
<td>N/Av</td>
</tr>
</tbody>
</table>

Skin corrosion or irritation: May cause irritation to skin.
Serious eye damage / eye irritation: Moderately irritating to eyes.
Respiratory or skin sensitization: Contains a component which is known to cause skin sensitization reactions.
Germ cell mutagenicity: Contains components which have tested positive for mutagenicity in standard Ames tests.
Carcinogenic status: This product contains Crystalline silica. Crystalline silica (respirable size) is classified as carcinogenic by inhalation by IARC (Group 1), ACGIH (Group A2), NTP (Group 1) and OSHA (OSHA Select carcinogen). During normal usage of the product as recommended, airborne dusts will not be present. See Section 7 for more information. No other components are listed as carcinogens by ACGIH, IARC, OSHA 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.
2,2-bis(4-hydroxyphenyl)propane, polymer with (chloromethyl)oxirane [CAS # 25068-38-6]

- **Ecotoxicity**: No data available.
- **Biodegradability**: Not readily biodegradable.
- **Bioaccumulative potential**: No data available.
- **Mobility in soil**: No data available.
- **PBT and vPvB assessment**: No data available.
- **Other adverse effects**: Toxic to aquatic life with long lasting effects.

Aliphatic glycidyl ether [CAS # 2461-15-6]

- **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.

Phenol, polymer with formaldehyde, glycidyl ether [CAS # 28064-14-4]

- **Ecotoxicity**: LC50 – Carassius auratus (goldfish) – 14 mg/L – 24 hr
- **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**: 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.

**Packaging**: Handle contaminated packaging in the same manner as the product.

**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

<table>
<thead>
<tr>
<th>Regulatory Information</th>
<th>UN Number</th>
<th>Shipping Name</th>
<th>Class</th>
<th>Packing Group</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDG</td>
<td>None</td>
<td>This product is not regulated according to Canadian TDG regulations.</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>TDG Additional Information</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>49 CFR/DOT</td>
<td>None</td>
<td>This product is not regulated according to US DOT regulations.</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>49 CFR/DOT Additional Information</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### SECTION 15 – REGULATORY INFORMATION
Canadian Information:
This product has been classified according to the hazard criteria of the Hazardous Products Regulations (HPR). This SDS contains all of the information required by the HPR.
Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on either the Domestic Substances List (DSL) or the Non-Domestic Substances List (NDSL).

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

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

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes:
Immediate (Acute) Health Hazard
Chronic Health Hazard.
Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

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

U.S. State Right To Know Laws
California Proposition 65: Warning! This product contains a chemical known to the State of California to cause cancer and/or reproductive/developmental effects.


SECTION 16 – OTHER INFORMATION

<table>
<thead>
<tr>
<th>Legend</th>
<th>HMIS Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>* - Chronic Hazard 0 - Minimal 1 – Slight 2 – Moderate 3 – Serious 4 – Severe</td>
</tr>
<tr>
<td></td>
<td>Health: *2 Flammability 0 Physical Hazard 0 PPE: Gloves, safety glasses</td>
</tr>
</tbody>
</table>

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

Disclaimer of Liability

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

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

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Revision date: 27-Aug-2016

End of Document