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. : (888) 512-7339 or (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 E 25
Product ID No. : 70011291
Trade Name/Synonyms : E 25
Material Use : Resilient Emulsion
Uses Advised Against : No information available.

SECTION 2 – HAZARDS IDENTIFICATION

GHS Classification per 29 CFR 1910.1200 (OSHA HCS 2012) and HPR (WHMIS 2015)

Carcinogenicity (Category 2B)

GHS Symbols

Signal Word : Warning!

Hazard statements : Suspected of causing cancer.

Precautionary statements : Obtain special instructions before use.
Do not breathe vapors or mist.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
Do not handle until all safety precautions have been read and understood.
Use personal protective equipment as required.
Dispose of contents/container in accordance with federal, state, and local.
Do not allow product to enter drains.

Hazards Not Otherwise Classified
None

% With Unknown Acute Toxicity : Less than 1% by weight of this product is comprised of ingredients with unknown acute 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>Vinyl acetate</td>
<td>108-05-4</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**

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. Seek immediate medical attention/advice.

Notes for Physician: Treat symptomatically.

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

- **Inhalation**: May cause slight irritation of the nose and throat.
- **Skin**: Direct skin contact may cause slight or mild, transient irritation.
- **Eyes**: May cause mild transient irritation.
- **Ingestion**: Ingestion of large amounts may cause stomach irritation. May cause nausea, vomiting, and diarrhea.

**Effects of long-term (chronic) exposure**

- Prolonged skin contact may cause skin irritation.

**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 and WHMIS 2015)**

- Flash point: Not applicable
- Flash point method: Not applicable
- Auto-ignition temperature: N/Av
- Flame projection length: Not applicable
- Lower flammable limit (% by vol): Not applicable
- Upper flammable limit (% by vol): Not applicable
- Oxidizing properties: None
- Flashback observed: Not applicable

**Explosion data: Sensitivity to mechanical impact / static discharge**

- Not expected to be sensitive to mechanical impact or static discharge.

**Suitable extinguishing media**

- Dry chemical, carbon dioxide and foam, water spray.

**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**

- Vinyl acetate; acetic acid; Aldehydes; Carbon oxides.

**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. Product may create a slip hazard when spilled. 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. Eliminate all ignition sources. Stop spill or leak at source if safely possible. Contain material, preventing it from entering sewer lines or waterways. Using shovels or squeegees, gather up spilled material and place in suitable container for later disposal (see Section 13). Notify the appropriate authorities as required.

Prohibited materials: None known.

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: Wear suitable protective equipment during handling. Use with adequate ventilation. Training the workers on the potential health hazards associated with product vapor is important. Secondary inhalation exposures could occur when cleaning equipment, or when removing or laundering the clothing. Do not breathe vapor or mist. Avoid contact with skin, eyes and clothing. Keep away from oxidizing materials. Keep containers tightly closed when not in use. Wash thoroughly after handling.

Storage requirements: Store in a cool, dry, well-ventilated area. No smoking in the area. Do not store near any incompatible materials (see Section 10). Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Protect against physical damage.

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

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS #</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>STEL</td>
</tr>
<tr>
<td>Vinyl acetate</td>
<td>108-05-4</td>
<td>10 ppm</td>
<td>N/Av</td>
</tr>
</tbody>
</table>

Ventilation and engineering measures: Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.

Respiratory protection: Respiratory protection is required if the concentrations exceed the TLV. If the TLV is exceeded, a NIOSH/MSHA-approved respirator with organic vapor cartridges is advised.

Skin protection: Impervious gloves must be worn when using this product. Nitrile rubber is recommended.

Eye / face protection: If splashing might occur, wear eye protection such as safety glasses with side shields.

Other protective equipment: Where extensive exposure to product is possible, use resistant coveralls, apron and boots to prevent contact.

General hygiene considerations: Avoid contact with eyes, skin and clothing. Do not breathe vapors/mist. 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>Physical state</th>
<th>Appearance</th>
<th>Odor</th>
<th>Odor Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>liquid</td>
<td>blue, milky</td>
<td>mild</td>
<td>N/Av</td>
</tr>
</tbody>
</table>
pH: 2.5 – 3.0  Specific gravity: 1.03 – 1.05
Boiling point: N/Av  Coefficient of water/oil distribution: N/Av
Melting/Freezing point: N/Av  Solubility in water: miscible
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): 57 - 60
Volatile organic compounds (VOCs): 2 g/L  General information: N/Av
Particle size: N/Av  Flammability properties: See Section 5.

SECTION 10 – REACTIVITY AND STABILITY INFORMATION

Stability and reactivity: Stable under the recommended storage and handling conditions prescribed.
Hazardous polymerization: Hazardous polymerization does not occur.
Conditions to avoid: Extreme heat. Do not use in areas without adequate ventilation.
Materials to avoid and incompatibility: Oxidizing agents; Acids.
Hazardous decomposition products: None known, 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
Calculated Acute Toxicity Estimates for the Product

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>LC50 (4 hr) Inhalation, rat, mg/L</th>
<th>LD50 Oral, rat, mg/kg</th>
<th>LD50 Dermal, rabbit, mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinyl acetate</td>
<td>14.1</td>
<td>2900</td>
<td>2335</td>
</tr>
</tbody>
</table>

Carcinogenic status: Contains vinyl acetate. Vinyl acetate is classified as carcinogenic by IARC (Group 2B, possibly carcinogenic to humans) and ACGIH (Category A3, Confirmed animal carcinogen with unknown relevance to humans).

Reproductive effects: None known. Not expected to cause reproductive effects.
Teratogenicity: None known. Not expected to be teratogenic.
Mutagenicity: None known. Not expected to be mutagenic.
Epidemiology: Not available.
Sensitization to material: Not expected to cause sensitization.
Synergistic materials: N/Av
Irritancy: Mild.
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

| 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: 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>Not regulated</td>
<td>Not Regulated</td>
<td>None</td>
<td></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>Not regulated</td>
<td>Not Regulated</td>
<td>None</td>
<td></td>
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<tr>
<td>49 CFR/DOT Additional Information</td>
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<td></td>
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<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:
- 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 may be subject to SARA notification requirements, since it contains Toxic Chemical constituents above their de minimus concentrations. This product contains: vinyl acetate.

U.S. State Right To Know Laws
California Proposition 65: This product does not contain any chemicals known to the State of California to cause cancer and/or reproductive harm.
Other U.S. State "Right to Know" Lists: The following chemicals are specifically listed by individual States: vinyl acetate (CA, FL, MA, MN, NJ, PA, RI).

SECTION 16 – OTHER INFORMATION

<table>
<thead>
<tr>
<th>HMIS Rating</th>
<th>Health:</th>
<th>Flammability</th>
<th>Physical Hazard</th>
<th>PPE:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*</td>
<td>1</td>
<td>0</td>
<td>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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