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 FB 9 L™ Gray
Product ID No.: 70011341
Trade Name/Synonyms: FB 9 L
Material Use: Pourable ShearFlex® Mortar
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 corrosion/irritation, Category 1A
- Serious eye damage/eye irritation, Category 1
- Carcinogenicity, Category 1A
- Specific target organ toxicity, single exposure; Respiratory tract irritation, Category 3
- Specific target organ toxicity, repeated exposure, Category 1.

GHS Pictograms

Signal Word: Danger

Hazard Statements
- Causes severe skin burns and eye damage.
- May cause cancer by inhalation.
- May cause respiratory irritation.
- Causes damage to lungs through prolonged or repeated inhalation.

Precautionary Statements
- Obtain special instructions before use. (See Section 7.) Do not handle until all safety precautions have been read and understood. Do not breathe dust. Use only outdoors or in a well-ventilated area. Wash hands and exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection. Wash contaminated clothing before reuse. Store in a well-ventilated place. Keep container tightly closed. Protect from sunlight. Store locked up. 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 91% by weight of this product consists 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>Crystalline silica, quartz</td>
<td>14808-60-7</td>
<td>30 – 60</td>
</tr>
<tr>
<td>Portland cement</td>
<td>65997-15-1</td>
<td>30 – 60</td>
</tr>
<tr>
<td>Vinyl acetate copolymer</td>
<td>24937-78-8</td>
<td>1 – 5</td>
</tr>
<tr>
<td>Amorphous fumed silica</td>
<td>69012-64-2</td>
<td>1 – 5</td>
</tr>
<tr>
<td>Calcium formate</td>
<td>544-17-2</td>
<td>1 – 5</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**
- Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- If experiencing respiratory symptoms: call a doctor/physician.

**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**
- 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. 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 and shortness of breath.

**Skin**
- Symptoms may include redness and itching. Contact with wet material, or moist areas of skin, causes skin burns. Skin thickening, cracking, or fissuring may occur.

**Eyes**
- Direct contact may strongly irritate or burn the eyes. Could cause blindness.

**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. Repeated or prolonged inhalation of fine dusts may cause severe scarring of the lungs, a disease called silicosis, and alveolar proteinosis (lower lung disease).

**Indication of need for immediate medical attention or special treatment**
- Difficulty breathing persists after removing the person to fresh air.
- Any burn to the skin.
- Any exposure to the eye which causes irritation.
- Ingestion.

### SECTION 5 – FIRE FIGHTING MEASURES

**Suitable extinguishing media**
- Carbon dioxide, dry chemical powder, foam.

**Unsuitable extinguishing media**
- Water. Contact with water may cause hydration and formation of caustic alkaline material.

**Hazardous combustion products**
- Calcium oxide, calcium oxalate, vinyl acetate, acetic acid, formic acid, formaldehydes, carbon monoxide, and carbon dioxide.

**Special fire-fighting procedures/equipment**
Environmental precautions

Fire hazards/conditions of flammability


Environmental precautions

Fire hazards/conditions of flammability


SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions

Protective equipment

Emergency Procedures

Methods and materials for containment and cleaning up

Prohibited materials

Environmental precautions

Reference to other sections

SECTION 7 – HANDLING AND STORAGE

Special instructions

Safe handling procedures

Storage requirements

Incompatible materials

Special packaging materials

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.

<table>
<thead>
<tr>
<th>Threshold Limit Values for the Ingredients</th>
<th>CAS #</th>
<th>ACGIH TLV TWA</th>
<th>STEL</th>
<th>OSHA PEL PEL</th>
<th>STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone</td>
<td>1317-65-3</td>
<td>TLV Withdrawn in 2007</td>
<td>N/Av</td>
<td>15 mg/m³ (Total dust); 5 mg/m³ (respirable)</td>
<td>N/Av</td>
</tr>
<tr>
<td>Portland cement</td>
<td>65997-15-1</td>
<td>1 mg/m³ (respirable, no asbestos and &lt; 1% crystalline silica)</td>
<td>N/Av</td>
<td>15 mg/m³ (Total dust); 5 mg/m³ (respirable)</td>
<td>N/Av</td>
</tr>
<tr>
<td>Crystalline silica, quartz</td>
<td>14808-60-7</td>
<td>0.025 mg/m³ (respirable fraction)</td>
<td>N/Av</td>
<td>0.05 mg/m³ (respirable) (final rule limit)</td>
<td>N/Av</td>
</tr>
<tr>
<td>Amorphous fumed silica</td>
<td>69012-64-2</td>
<td>2 mg/m³ (respirable)</td>
<td>N/Av</td>
<td>N/Av</td>
<td>N/Av</td>
</tr>
<tr>
<td>Calcium formate</td>
<td>544-17-2</td>
<td>N/Av</td>
<td>N/Av</td>
<td>N/Av</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 dust generated from the handling of this product.

Personal Protection Equipment

Eye / face protection: Safety glasses or 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. Glove 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 dust, or exposures in excess of any PEL, wear an appropriate particulate respirator (dust mask). Mask should be rated at N-95 or higher.

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 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>Physical state</th>
<th>solid</th>
<th>Appearance</th>
<th>gray powder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor</td>
<td>No odor</td>
<td>Odor threshold</td>
<td>N/Av</td>
</tr>
<tr>
<td>pH</td>
<td>10 – 12</td>
<td>Specific gravity</td>
<td>2.7 – 3.1</td>
</tr>
<tr>
<td>Boiling point</td>
<td>N/Ap</td>
<td>Coefficient of water/oil distribution</td>
<td>N/Av</td>
</tr>
<tr>
<td>Melting/Freezing point</td>
<td>N/Av</td>
<td>Solubility in water</td>
<td>&lt; 55 g/L</td>
</tr>
<tr>
<td>Vapor pressure (mm Hg @ 20°C / 68°F)</td>
<td>N/Av</td>
<td>Evaporation rate (n-Butyl acetate = 1)</td>
<td>N/Av</td>
</tr>
<tr>
<td>Vapor density (Air = 1)</td>
<td>N/Av</td>
<td>Volatiles (% by weight)</td>
<td>N/Av</td>
</tr>
<tr>
<td>Volatile organic compounds (VOCs)</td>
<td>0 g/L</td>
<td>Flammability classification</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Particle size</td>
<td>N/Av</td>
<td>Lower flammable limit (% by vol)</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash point</td>
<td>N/Av</td>
<td>Upper flammable limit (% by vol)</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash point method</td>
<td>N/Av</td>
<td>Decomposition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>N/Av</td>
<td>Oxidizing properties</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
<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**

Contact with water may cause hydration and formation of caustic calcium hydroxide.

**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**

- **Inhalation**: Not Available
- **Oral**: Not Available
- **Dermal**: Not Available

**Toxicological data**

There are insufficient data for estimating the product’s acute toxicity. Several components become caustic in the presence of water, and therefore should not be inhaled, ingested, or allowed to contact skin. See below for individual ingredient acute toxicity data.

<table>
<thead>
<tr>
<th>Acute Toxicity Parameters for the Ingredients</th>
<th>CAS #</th>
<th>LC50, Inhalation mg/L, Rat, 4 hr</th>
<th>LD50, Oral mg/kg, rat</th>
<th>LD50, Dermal mg/kg, rabbit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium sulfate</td>
<td>7778-18-9</td>
<td>N/Av</td>
<td>&gt;3,000</td>
<td>NA/Nav</td>
</tr>
<tr>
<td>Portland cement</td>
<td>65997-15-1</td>
<td>N/Av</td>
<td>N/Av</td>
<td>N/Av</td>
</tr>
<tr>
<td>Crystalline silica, quartz</td>
<td>14808-60-7</td>
<td>N/Av</td>
<td>N/Av</td>
<td>N/Av</td>
</tr>
<tr>
<td>Amorphous fumed silica</td>
<td>69012-64-2</td>
<td>N/Av</td>
<td>&gt;22,500</td>
<td>N/Av</td>
</tr>
<tr>
<td>Calcium formate</td>
<td>544-17-2</td>
<td>N/Av</td>
<td>1,920 (mouse)</td>
<td>N/Av</td>
</tr>
</tbody>
</table>

**Skin corrosion or irritation**

Causes skin corrosion when wet.

**Serious eye damage / eye irritation**

Causes eye burns. May cause blindness.

**Respiratory or skin sensitization**

Portland cement may cause an allergic skin reaction, in hypersensitive individuals possibly due to trace amounts of chromium.

**Germ cell mutagenicity**

None known.

**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). 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**

May cause lung damage upon repeated or prolonged exposure.

**Aspiration hazard**

None known.

**Additional information**

N/Av
**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**

- **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**

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. It contains Crystalline silica, quartz.

Other State Right to Know Laws:

<table>
<thead>
<tr>
<th>Ingredient on State RTK Law?</th>
<th>CAS #</th>
<th>CA</th>
<th>MA</th>
<th>MN</th>
<th>NJ</th>
<th>PA</th>
<th>RI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portland cement</td>
<td>65997-15-1</td>
<td>No</td>
<td>YES</td>
<td>No</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Calcium sulfate</td>
<td>7778-18-9</td>
<td>No</td>
<td>YES</td>
<td>No</td>
<td>YES</td>
<td>YES</td>
<td>No</td>
</tr>
<tr>
<td>Crystalline silica, quartz</td>
<td>14808-60-7</td>
<td>No</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td></td>
</tr>
<tr>
<td>Amorphous fumed silica</td>
<td>69012-64-2</td>
<td>No</td>
<td>YES</td>
<td>No</td>
<td>YES</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 16 – OTHER INFORMATION

HMIS Rating: * - Chronic Hazard 0 - Minimal 1 – Slight 2 – Moderate 3 – Serious 4 – Severe

Health: *3 Flammability 0 Physical Hazard 1 PPE: G

Gloves, safety glasses, and dust respirator

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.

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