

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: 1-800255-3924 OR 1-813-248-0585 (call collect)
Product Identifier : ARDEX K 16™
Product ID No. : 70063761
Trade Name/Synonyms : K 16
Material Use : High-Flow Self-Leveling Underlayment

SECTION 2 – HAZARDS IDENTIFICATION

GHS Classification per 29CFR 1910 (OSHA Hazard Communication Standard)

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.

WHMIS Classification

Class D2A (Materials Causing Other Toxic Effects, Very Toxic Material);
Class E (Corrosive Material).

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 90% by weight of this product consists of ingredients with unknown acute toxicity.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS #	% (by weight)
Crystalline silica, quartz	14808-60-7	30 – 60
Limestone	1317-65-3	30 – 60
Calcium aluminate	65997-16-2	10 – 30
Calcium sulfate	7778-18-9	5 – 10
Vinyl acetate copolymer	24937-78-8	1 – 5
Portland cement	65997-15-1	1 – 5

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**
: 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.
- Flammability classification (OSHA 29 CFR 1910.1200, WHMIS)**
: Not flammable

SECTION 6 – ACCIDENTAL RELEASE MEASURES

- Personal precautions** : 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).
US CERCLA Reportable quantity (RQ): None reported.
- Methods and materials for containment and cleaning 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 HEPA vacuum, or other dustless methods, gather up spilled material and place in suitable container for later disposal (see Section 13). Avoid adding water, material becomes alkaline when wet. Notify the appropriate authorities as required.
- Prohibited materials** : Avoid adding water, material becomes alkaline when wet.
- 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

- Special instructions** : Mixing the product according to the directions in the Technical Data Sheet will produce airborne dusts, including crystalline silica. Wear a dust mask (N-95 or higher) while mixing. Use ventilation to control levels of dust in the work area.
- Safe handling procedures** : Corrosive! Wear chemically resistant protective equipment during handling. Use in a well-ventilated area. Training the workers on the potential health hazards associated with product dust is important. Secondary inhalation exposures could occur when cleaning equipment, or when removing or laundering the clothing. Do not breathe dust. Avoid contact with skin, eyes and clothing. Avoid wet or humid conditions. Keep away from acids and incompatibles. Avoid and control operations which create dust. Keep containers tightly closed when not in use. Wash thoroughly after handling.
- 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.

Odor	: No odor	Odor threshold	: N/Av
pH	: 10 – 12	Specific gravity	: 2.7 – 3.1
Boiling point	: N/Av	Coefficient of water/oil distribution	: N/Av
Melting/Freezing point	: N/Av	Solubility in water	: < 55 g/L
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)	: 0 g/L		
Particle size	: N/Av	Flammability classification	: Not flammable
Flash point	: N/Av	Lower flammable limit (% by vol)	: Not available
Flash point method	: N/Av	Upper flammable limit (% by vol)	: Not available
Auto-ignition temperature	: N/Av	Decomposition temperature	: Not available
Viscosity	: Not available	Oxidizing properties	: Not available

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	: <i>Inhalation</i> : YES <i>Skin Absorption</i> : NO <i>Skin and Eyes</i> : Yes <i>Ingestion</i> : YES
Symptoms of exposure	: See Section 4.
Toxicological data	: There are no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.

Acute Toxicity Parameters for the Ingredients	CAS #	LC50, Inhalation mg/L, Rat, 4 hr	LD50, Oral mg/kg, rat	LD50, Dermal mg/kg, rabbit
Limestone	1317-65-3	N/Av	6,450	N/Av
Calcium aluminate	65997-16-2	N/Av	N/Av	N/Av
Calcium sulfate	7778-18-9	N/Av	> 3,000	NAv
Portland cement	65997-15-1	N/Av	N/Av	N/Av
Vinyl acetate copolymer	24937-78-8	N/Av	> 1,000	N/Av
Crystalline silica, quartz	14808-60-7	N/Av	N/Av	N/Av

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

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** : 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

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
TDG	None	This product is not regulated according to Canadian TDG regulations.	None	None	None
TDG Additional Information	None				
49 CFR/DOT	None	This product is not regulated according to US DOT regulations.	None	None	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 either the Domestic Substances List (DSL) or the Non- Domestic Substances List (NDSL). It contains components listed on the Canadian HPA Ingredient Disclosure List above the *de minimus* amount on the IDL. It contains Crystalline silica, quartz.

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: 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:

Ingredient on State RTK Law?	CAS #	CA	MA	MN	NJ	PA	RI
Limestone	1317-65-3	No	YES	No	YES	YES	YES
Portland cement	65997-15-1	No	YES	No	YES	YES	YES
Calcium sulfate	7778-18-9	No	YES	No	YES	YES	No
Crystalline silica, quartz	14808-60-7	No	YES	YES	YES	YES	YES

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
 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. This Safety Data Sheet is valid for three (3) years.

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