



BE SURE. BE KRYTON.

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier:

- KIM Krystol Internal Membrane Concrete Waterproofing Admixture
- KIM-AE Krystol Internal Membrane-AE Concrete Waterproofing Admixture
- KIM-HS Krystol Internal Membrane-HS Concrete Waterproofing Admixture
- KIM-ES Krystol Internal Membrane-ES Concrete Waterproofing Admixture

Other Means of Identification:

- KIM
- KIM-AE
- KIM-ES
- KIM-HS

Product Code: K-300, K-301, K-302

Product Use: A chemical admixture in dry powder form that creates waterproof concrete

WHMIS Classification: D2A, toxic; E, Corrosive (alkaline when moistened)

CAS Number: Not Established

Manufacturer's Name: Kryton International Inc.

Address: 1645 E. Kent Avenue, Vancouver, BC, Canada, V5P 2S8

Telephone Number: 1-604-324-8280

FAX Number: 1-604-324-8899

Web Site: www.kryton.com

Emergency Contacts & Phone Number:

Kryton International Inc. 1.800.267.8280 (Business Hours)

Call a poison center or doctor/physician in your country

BC, Canada: BC Drug and Poison Information Centre 604.682.5050

Australia: Poisons Information Centre 13 11 26

US: American Association of Poison Control Centers 1.800.222.1222

Date MSDS Updated: Oct 1, 2013

MSDS Updated by: Research and Development Department, Kryton International Inc.

Date MSDS Prepared: May 29, 1995

MSDS Prepared by: Dept. Group #7, Contact Testing

2. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

Ingredient name CAS # EINECS	Content (%)	ACGIH TLV-TWA (mg/m ³)	OSHA PEL-8h TWA (mg dust/m ³) T: total, R: Respirable	LD ₅₀ LC ₅₀	European Hazard Classification
Portland Cement 65997-15-1 266-043-4	15-40	10	15 (T) 5 (R)	Not Available Not Available	C, T, Xi
Silica, Quartz 14808-60-7 238-878-4	15-40 (Respirable: <0.003)	0.025	30/(%SiO ₂ +2) (T) 10/(%SiO ₂ +2) (R)	500mg/kg (oral, rat) Not Available	C, T, Xi



3. HAZARDS IDENTIFICATION

Route of Entry: Skin Contact, Eye Contact, Inhalation and Ingestion



Emergency Overview:

- Grey, odorless and fine powder. It is not combustible or explosive. Short-term exposure to the dry powder presents little or no hazard. May irritate eyes, skin and respiratory tract. Exposure of sufficient duration to wet product or to dry product on moist areas of body, can cause caustic burn.
- This product has not been identified as a risk of lung cancer. This product contains crystalline quartz from sand (silicon dioxide). Crystalline quartz is classified as a carcinogen by IARC and NTP; it is a suspected human carcinogen by ACGIH; it has not classified as a carcinogen by NOHSC. The major route of entry is inhalation. Although this product contains less than 0.003% of respirable silica dust, well ventilate area and respirator is recommended. When wetted or final set form, risk of any airborne respirable dust will be low, but dry residues, or dust from cutting, grinding, abrading or finishing the set product may contain respirable crystalline silica.

WHMIS Symbol:

D2A, toxic 	E, Corrosive (when moistened) 
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Globally Harmonized System (GHS):

Classification:	Acute Toxicity Category 4	Skin Corrosion/Irritation Category 1 (alkaline when moistened)
Symbol:		 (alkaline when moistened)
Signal Word:	Warning	Danger (when moistened)
Hazard Statements:	Harmful if swallowed Harmful if contact with skin Harmful if inhaled.	Cause severe skin burns and eye damage (alkaline when moistened).

4. FIRST AID MEASURES

When contacting a physician, take this MSDS with you.

Eyes:

- Do not rub eye(s) as additional cornea damage is possible by mechanical stress.
- Remove any contact lenses and open the eyelid(s) widely to flush eye(s) immediately by thoroughly rinsing with plenty of clean water for at least 15 minutes to remove all particles. If possible, use isotonic water (0.9% NaCl).
- Contact a specialist of occupational medicine or an eye specialist.

Skin:

- For dry product, remove and rinse abundantly with water.
- For wet product, wash skin with water.
- Remove contaminated clothing, footwear, watches, etc. and clean thoroughly before re-using them.
- Seek medical treatment in all cases of irritation or burns.

Ingestion:

- Do not induce vomiting.
- If person is conscious, wash out mouth with water and give plenty of water to drink.
- Get immediate medical attention or contact anti poison centre.

Inhalation:

- Remove to fresh air.
- If breathing has stopped, institute artificial respiration.
- Get medical attention if discomfort remains.

Effects of Acute and Chronic Exposure to Product: See Part 11.

5. FIREFIGHTING MEASURES

Flammability: Noncombustible

Means of Extinction: Water, Fog, Alcohol-Resistant Foam, Dry Chemical or Carbon Dioxide (CO₂)

Flashpoint and Method: Non-combustible, >200F

Autoignition Temperature: Not Applicable

Fire and Explosion Data: Not Applicable

Hazardous Combustion Products: Not Applicable

Fire Fighting Instructions: Firefighters should wear self-contained breathing apparatus and full protective gear. Product reacts with water and creates heat.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Wear protective equipment as described under section 8 and follow the advice for safe handling and use given under section 7. Emergency procedures are not required.

Environment precautions: Do not wash product down sewage and drainage systems or into bodies of water.

Methods for cleaning up:

- Use dry cleanup methods that do not cause airborne dispersion, e.g.: Vacuum cleaner (Industrial portable units, equipped with high efficiency particulate filters (HEPA filter) or equivalent technique).
- Wipe-up the dust by mopping, wet brushing or water spraying and remove wet product.
- When vacuum cleaning or wet cleaning are not possible and only dry cleaning with brushes can be done, ensure that the workers wear appropriate personal protective equipment and prevent dust from spreading.
- Place spilled materials into a container. Allow material to dry and solidify before disposal.

7. HANDLING AND STORAGE

Handling Procedures and Equipment:

- Avoid contact with skin and eyes by wearing protective equipment: safety goggles, protective clothing, nitrile gloves and waterproof shoes.
- Use in well-ventilated area or wear NIOSH-approved respirator with particulate cartridges or filter.
- Do not handle or store near food and beverages or smoking materials.
- Carrying bags/buckets may cause sprains and strains to the back, arms, shoulders and legs.
- Handle with care and use appropriate control measures.
- Wash hands thoroughly with soap and water after handling.
- Keep container closed when not in use.

Storage Requirements:

- Bulk product should be stored in containers that are waterproof, dry (internal condensation minimized), clean and protected from contamination.
- Product can build-up or adhere to the walls of a confined space. It can release, collapse or fall unexpectedly.
- Keep containers tightly closed.
- Protect from moisture.
- Store in a cool, dry place.
- Keep out of reach of children.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Exposure Limits:

- Portland Cement, CAS# 65997-15-1
WELs EH40/2005 (UK), 8 hr TWA, 2007 : 10 mg/m³ inhalable dust, 4 mg/m³ respirable dust.
ACGIH TLV-TWA 2000: 10 mg total dust/m³
OSHA PEL, 8-hr TWA: 15 mg total dust/m³, 5 mg respirable dust/m³
Chromium VI (hexavalent): 0.05mg/m³- sensitiser
- Silica, Quartz, CAS#14808-60-7
WELs EH40/2005 (UK), 8 hr TWA, 2007: 0.1 mg/m³ respirable dust
ACGIH TLV-TWA 2008: 0.025 mg respirable dust/m³
OSHA PEL, 8-hr TWA: 10 mg respirable dust/m³ (percent silica + 2)
NIOSH REL, 8-hr TWA: 0.05 mg respirable dust/m³

8. EXPOSURE CONTROL/PERSONAL PROTECTION CONT'D

Specific Engineering Controls: Use general or local exhaust ventilation to keep dust levels below exposure limits. If exceed the limits, use a properly fitted and NIOSH approved respirator.

Personal Protective Equipment:

- Gloves: Chemical resistant rubber or nitrile gloves
- Respirator: NIOSH approved with particulates filter or cartridge
- Eye: Safety goggles or safety glasses with side shields
- Footwear: Waterproof
- Clothing: Long sleeve and long pants to avoid skin contact
- Other: Wash thoroughly with soap and water after handling

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Powder (Solid)

Odour and Appearance: Odourless, Grey, mixture of finely divided and granules particulate.

Odour Threshold: Not Applicable

Specific Gravity: 2.6 – 3.0

Vapor Density: Not Applicable

Vapor Pressure: Not Applicable

Evaporation Rate: Not Applicable

Boiling Point: Not Applicable

Melting Point: Not Applicable

pH (in water): 12-14 (Alkaline)

Coefficient of Water/Oil Distribution: Not Applicable

Solubility in Water: Slightly soluble (10-15%)

Relative bulk density: 1.3 – 1.6

Viscosity: Not Applicable

VOC content: 0 g/L, EU (w/w) 0%

Flammability: Noncombustible

Flashpoint: Not Applicable

Upper/Lower Flammability or Explosive Limits: Not Applicable

Auto-ignition Temperature: Not Applicable

Decomposition Temperature: Not Applicable

10. STABILITY AND REACTIVITY

Chemical Stability: Stable

Conditions to Avoid (Stability): Unintended contact with water or moisture, which produces caustic solutions, pH 12-14.

Incompatibility with Other Substances: React with acids, ammonium salts, fluorine, lithium and aluminum, which may liberate Carbon Monoxide, Carbon Dioxide or Hydrogen.

Hazardous Polymerization: Cannot occur

Possibility of Hazardous Reactions: No additional remark

Hazardous Decomposition Products: Will not spontaneously occur. Adding water produces caustic calcium hydroxide.

Other Precautions: When mix with water, the mixture is caustic with pH12-14 and it can get hot.

11. TOXICOLOGICAL INFORMATION

Routes of Entry: Skin Contact, Eye Contact, Inhalation and Ingestion

Effects of Acute Exposure to Product:

- May cause eyes, skin and respiratory irritation, inflammation or severe chemical burns if direct contacted by large amount of product.
- May cause skin thickening, cracking or fissuring if contacted to wet product or dry product with wet skin.
- May cause coughing, sneezing and shortness of breath if exposed in excess of occupational exposure limits.

Effects of Chronic Exposure to Product:

- Multiple skin exposure over weeks or months leading to eczema or dermatitis. Content of sensitizing Cr(VI) is below 0.002% according to regulation.
- Exposure to crystalline silica may cause silicosis and series lung disease.

11. TOXICOLOGICAL INFORMATION CONT'D

- Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation
- Sensitivity reactions may occur from prolonged and repeated exposure

Irritancy of Product: Can be irritating to eyes, skin, and respiratory tract.

Skin Sensitization: Can cause caustic burns and dermatitis when wet.

Respiratory Sensitization: Can cause chemical burn when wet. Respirable crystalline silica can cause silicosis and series lung disease.

Numerical Measures of Toxicity: Not Available

Carcinogenicity: No causal association between this product exposure and cancer has been established, but Silica, Quartz (CAS# 14808-60-7), one of the ingredients is listed as carcinogen by IARC and NTP. The respirable dust is lower than 0.003% in this product. It is lower than the GHS classification concentration limit($\geq 0.1\%$), so the product is not classified as carcinogen.

- Silica, Quartz (CAS# 14808-60-7)
IARC Group 1 (Carcinogenic to humans)
ACGIH Group A2 (Suspected human carcinogen)
NTP Known carcinogen

Reproductive Toxicity: Not Available

Teratogenicity: Not Available

Mutagenicity: Not Available

Embryotoxicity: Not Available

Name of Synergistic Products/ Effects: Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity:

- The product is not expected to be hazardous to the environment.
- The addition of large amounts to water may, however, cause a rise in pH and may therefore be toxic to aquatic life under certain circumstances.

Mobility: Dry product is not volatile but might become airborne during handling operations.

Persistence and degradability/Bio accumulative potential/Results of PBT Assessment/Other adverse effects: Not Available

13. DISPOSAL CONSIDERATIONS

Always dispose of in accordance with local, provincial (state), and federal regulations.

Unused Residue or Dry Spillage: Pick up dry material. Possibly reuse depending upon shelf life considerations and the requirement to avoid dust exposure. In case of disposal, harden with water and dispose according to local legislation.

Slurries: Allow to harden, avoid entry in sewage and drainage systems or into bodies of water and dispose according to 13.3.

After Addition of Water and Hardened:

- Dispose of according to local legislation. Avoid entry into the sewage water system.
- Dispose of the hardened product as concrete waste. Due to inertisation, concrete waste is not a dangerous waste.
- EWC entries: 10 13 14 (waste concrete or concrete sludge) or 17 01 01 (concrete).

Packaging:

- Completely empty the packaging and recycle / dispose in accordance with local legislation.
- EWC entry: 15 01 02 (plastic packaging).

14. TRANSPORT INFORMATION

Special Shipping Information: This product is not listed as a Hazardous Material under TDG, DOT, IMDG, IATA and ADR/RID. No special precautions are needed apart from those mentioned under Section 8.

PIN: Not Applicable

TDG (Canada): Not regulated

IMDG: Not regulated

DOT (U.S.): Not regulated

IATA: Not regulated

ADR/RID: Not regulated

UN Number: Not listed

15. REGULATORY INFORMATION

This product is classified as non-Dangerous Goods.

WHMIS Classification: D2A, toxic; E, Corrosive (when moistened)

European Hazard Symbol: C, Corrosive (when moistened); T, Toxic; Xi, Irritant

Globally Harmonized System (GHS) Classification:

Acute Toxicity Category 4; Skin Corrosion/Irritation Category 1 (when moistened)

HMIS: Health *2; Flammability 0; Physical Hazard 1.

OSHA: This product is considered a hazardous chemical. It is recommended to follow "Safety and Health Program Management Guidelines" by OSHA.

TSCA: This product is exempted from TSCA because it is defined as a mixture.

SARA: This product is considered a hazardous chemical and has a delayed health hazard under section 311 and 312 of the Emergency Planning and Community Right to Know Act (EPCRA) of 1986. This product does not contain any ingredients regulated under Section 313 of the EPCRA, 1986 or 40 CFR 372.

U.S. State Regulations:

- New Jersey - Workplace Hazard
- Pennsylvania - Workplace Hazard
- California - Proposition 65
- Massachusetts - Hazardous Substance

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. OTHER INFORMATION

Abbreviations:

ACGIH	American Conference of Governmental Industrial Hygienists
ADR/RID	Agreement on the Transport of Dangerous Goods by Road/ Regulations on the International Transport of Dangerous Goods by Rail
CAS#	Chemical Abstract Service number
CPR	Controlled Products Regulations
DOT	U.S. Department of Transportation
EINECS	European Inventory of Existing Commercial Chemical Substances
EPCRA	Emergency Planning and Community Right to Know Act
EWC	European Waste Catalogue
GHS	Globally Harmonized System
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC ₅₀	Lethal Concentration
LD ₅₀	Lethal Dose
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
SARA	Superfund Amendments and Reauthorization Act
TDG	Transportation of Dangerous Goods
TLV	Threshold Limit Value

16. OTHER INFORMATION CONT'D

TSCA	Toxic Substance Control Act
TWA	Time Weighted Average (8 hour)
WELs	Workplace Exposure Limits
WHMIS	Workplace Hazardous Materials Information System

Manufacturer's notes

- The information on this data sheet reflects the currently available knowledge and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product, including the use of the product in combination with any other product or any other process, is the responsibility of the user.
- It is implicit that the user is responsible for determining appropriate safety measures and for applying the legislation covering his own activities.