



SMART CONCRETE®

1. IDENTIFICATION

Product Identifier:

Krystol Internal Membrane (KIM)
Krystol Mortar Admixture
Krystol T1
Krystol T2
Krystol Broadcast
Krystol Waterstop Treatment
Krystol Waterstop Grout
Krystol Repair Grout
Krystol Bari-Cote
Krystol Plug
Hydrostop Coating Part-A
Hydrostop Grout

Recommended use: Concrete Waterproofing and Protection

Restrictions on use: For professional use only

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 Telephone Number:

Kryton International Inc. 1.800.267.8280 (Business Hours, 8:00am-4:30pm Pacific Time)

Call a poison center or doctor/physician in your country

BC, Canada: BC Drug and Poison Information Centre 604.682.5050

US: American Association of Poison Control Centers 1.800.222.1222

Date SDS Updated: August 18, 2017

SDS Updated by: Research Center, Kryton International Inc.

Date SDS Prepared: May 29, 1995

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

2. HAZARD IDENTIFICATION

Hazard Classification

Skin Irrit. 1C	H314	Causes severe skin burns and eye damage
Eye Dam. 1	H318	Causes serious eye damage
Skin Sens. 1	H317	May cause allergic skin reaction
SOT SE 3	H335	May cause respiratory irritation
SOT RE 2:	H373	May cause damage to respiratory organs through prolonged or repeated exposure

Label Elements



GHS05



GHS07



GHS08

DANGER

Hazard Statements

- H314 Causes severe skin burns and eye damage
- H318 Causes serious eye damage
- H317 May cause allergic skin reaction
- H335 May cause respiratory irritation
- H373 May cause damage to respiratory organs through prolonged or repeated exposure

Precautionary Statements

- P201 - Obtain special instructions before use
- P202 - Do not handle until all safety precautions have been read and understood
- P260 - Do not breathe dust
- P264 - Wash hands, forearms and exposed areas thoroughly after handling
- P272 - Contaminated work clothing should not be allowed out of the workplace.
- P280 - Wear protective gloves, protective clothing, face protection and eye protection
- P301, P330, P331 - If swallowed, rinse mouth, do not induce vomiting.
- P303, P361, P353, P352 - If on skin or hair, remove all contaminated clothing, rinse skin thoroughly and wash with soap and water.
- P304, P340 - If inhaled, remove person to fresh air and keep at rest in position of comfortable breathing
- P305, P351, P338 - If in eyes, rinse with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
- P310 - Immediately call a poison center or doctor/physician

Other Hazards

- 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.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient name	Content (%)	CAS #	EINECS#	GHS Classification
Portland Cement	28-40	65997-15-1	266-043-4	Skin Irrt. 2 H315 Eye Dam. 1 H318 Skin Sens. 1 H317 STOT SE 3 H335
Silica, Quartz	30-40 (Respirable: <0.003)	14808-60-7	238-878-4	STOT SE 2 H373
Calcium Hydroxide	5-20	1305-62-0	215-137-3	Skin Irrt. 2 H315 Eye Dam. 1 H318 STOT SE 3 H33

4. FIRST AID MEASURES

When contacting a physician, take this SDS with you.

Inhalation:

- Remove to fresh air and at rest and in a position of comfortable breathing.
- If breathing has stopped, institute artificial respiration.
- Get medical attention if discomfort remains.

Skin contact:

- 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.

Eyes contact:

- Do not rub eye(s) as additional cornea damage is possible by mechanical stress.
- Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 60 minutes. Immediately call a POISON CENTER or doctor/physician.

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 center.

Most Important Symptoms and Effects both Acute and Delayed

Acute: Corrosive to skin, eyes and respiratory tract. Exposure may produce allergic reaction.

Delayed: Long term exposure to dust may result in lung damage.

Immediate medical attention and special treatment: Move person to fresh air and away from exposure. Wash all exposed areas water and rinse thoroughly.

5. FIREFIGHTING MEASURES

Extinguishing Media: Water, Fog, Alcohol-Resistant Foam, Dry Chemical or Carbon Dioxide (CO₂)

Unsuitable Extinguishing Media: Do not use water jet which may spread the surrounding fire.

Specific hazards:

Fire Hazard: Not combustible

Explosion Hazard: Not explosive

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.

Reactivity: Reacts with water to release heat and forming alkaline solutions. Cement is alkaline and is incompatible with acids, ammonium salts and aluminum. Cement dissolves in hydrofluoric acid to produce corrosive tetrafluoride gas. Cement will react with strong oxidizers including fluorine, boron or chlorine trifluoride and oxygen difluoride.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Do not breathe dust. Avoid contact with skin, eyes and clothing. 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.
- Reacts with water to release heat and forming alkaline solutions. Cement is alkaline and is incompatible with acids, ammonium salts and aluminum. Cement dissolves in hydrofluoric acid to produce corrosive tetrafluoride gas. Cement will react with strong oxidizers including fluorine, boron or chlorine trifluoride and oxygen difluoride.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Occupational Exposure Limits:

- Portland Cement, CAS# 65997-15-1
- ACGIH TLV: TWA: 1 mg/m³ 8hours. A2. Form: Respirable fraction
- NIOSH REL: TWA: 5 mg/m³ 10 hours. Form: Respirable fraction
TWA: 10 mg/m³ 10 hours. Form: Total dust
- OSHA PEL: TWA: 5mg/m³ 8 hours. Form: Respirable fraction
TWA: 15 mg/m³. 8 hours. Form: Total dust
- Cal/OSHA PEL: TWA: 5 mg/m³. 8 hours. From: respirable fraction
- Cal/OSHA PEL: TWA: 10 mg/m³. 8 hours. Form: Total dust

WELs EH40/2005 (UK), TWA: 8 hours. 10 mg/m³ inhalable dust, 4 mg/m³ respirable dust. Chromium VI (hexavalent): 0.05mg/m³ - sensitizer

• Silica, Quartz, CAS#14808-60-7

ACGIH TLV: TWA: 0.025 mg/m³ 8 hours. Form: Respirable fraction

NIOSH REL: TWA: 0.05 mg/m³ 10 hours. Form: Respirable dust

OSHA PE: TWA: 10 mg/m³ divided by %SiO₂+ 2: Respirable

TWA: 30 mg/m³ divided by %SiO₂+ 2: Total dust

Cal/OSHA PEL: TWA: 0.1 mg/m³. 8 hours. Form: respirable fraction

WELs EH40/2005 (UK) TWA: 8 hours. 0.1 mg/m³ respirable dust

• Calcium Hydroxide, CAS#1305-62-0

ACGIH TLV: TWA: 5 mg/m³ 8hours. A2. Form: Total dust

NIOSH REL: TWA: 5 mg/m³ 10 hours. Form: Respirable fraction

TWA: 10 mg/m³ 10 hours. Form: Total dust

OSHA PEL: TWA: 5mg/m³ 8 hours. Form: Respirable fraction

TWA: 15 mg/m³. 8 hours. Form: Total dust

Cal/OSHA PEL: TWA: 5 mg/m³. 8 hours. Form: Total dust

WELs EH40/2005 (UK) TWA: 8 hours. 5 mg/m³ Total dust

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. Do not eat, drink or smoke while handling the product to avoid contact with skin or mouth.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Powder (Solid)

Odour and Appearance: Odourless, Grey or off-white, 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

Freezing 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

Viscosity: Not Applicable

Partition Coefficient: 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 serious lung disease.
- 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 serious 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

DOT (U.S.): Not regulated

ADR/RID: Not regulated

IMDG: Not regulated

IATA: 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.

Hazardous Substances and New Organisms Act (HSNO – EPA New Zealand) Approval Code: HSR 002542: Construction Products (Corrosive [8.2C]) Group Standard. Subclasses 6.5, 6.9, 6.9B, 8.2C, 8.3A, 9.1D

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 SDS 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
LC50	Lethal Concentration
LD50	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
TSCA	Toxic Substance Control Act
TWA	Time Weighted Average (8 hour)
WELs	Workplace Exposure Limits
WHMIS	Workplace Hazardous Materials Information System

Hazard Statements in Full

H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H317	May cause allergic skin reaction
H335	May cause respiratory irritation
H373	May cause damage to respiratory organs through prolonged or repeated exposure

Precautionary Statements in Full

P201	Obtain special instructions before use
P202	Do not handle until all safety precautions have been read and understood
P260	Do not breathe dust
P264	Wash hands, forearms and exposed areas thoroughly after handling
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves, protective clothing, face protection and eye protection

Responsive Precautionary Statements

P301, P330, P331	- If swallowed, rinse mouth, do not induce vomiting.
P303, P361, P353, P352	- If on skin or hair, remove all contaminated clothing, rinse skin thoroughly and wash with soap and water.
P304, P340	- If inhaled, remove person to fresh air and keep at rest in position of comfortable breathing
P305, P351, P338	- If in eyes, rinse with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
P310	- Immediately call a poison center or doctor/physician

Manufacture'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.

Date of last revision of this SDS: August 18, 2017