

American National Standard ANSI Z400-1-2004; Date Prepared: February 9, 2007

## Section 1 Chemical Product and Company Identification

Identity: Crystal Lok® Concrete Treatment

## Manufacturers Name:

Crystal Lok, LLC

Emergency Telephone Number 916-716-2757

## Address:

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Sacramento, California

95825-7684 U.S.A.

Information Telephone Number (916) 716-2757 M-Sat 8:00 AM- 5:00 PM Pacific Time

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## Section 2 - Hazards Identification

Appearance and Odor: Clear-hazy and colorless-no odor or musty odor, Causes eye, skin and digestive tract irritation. Spray mist causes irritation to respiratory tract. High pH harmful to aquatic life.

Fire and Explosion Hazards: Noncombustible. Reacts with acids, ammonium salts, reactive metals, some organics.

Reactivity Hazards: STORE, MIX, or APPLY IN STEEL or PLASTIC CONTAINERS ONLY.

Do Not Store in contact with aluminum, tin, lead or zinc. Gels and generates heat when mixed with acid.

May react with ammonium salts resulting in evolution of ammonia gas. Flammable hydrogen gas may be produced on contact with aluminum, tin, lead, and zinc. Spills are slippery. Can etch glass.

Pressurized Container: none.

Toxic or Poisonous: none.

Danger When Inhaled: Spray mist irritating to respiratory tract.

Chronic hazard: no known chronic hazard.

Skin or Eye Irritation: Skin- Acute contact may cause irritation.

Eye- Causes irritation.

Inhalation: Spray mist irritating to respiratory system.

Ingestion: May cause irritation to mouth, esophagus, stomach.

See Section 4: First Aid Measures:

## Section 3: Composition / Information On Ingredients

Hazardous Components: none

Chemical Abstract Service (CAS) Registry numbers:

Chemical and Common Name	CAS Registry Number	OSHA PEL	ACGIH TLV
Water	7732-18-5	Not Established	Not Established
Silicic acid, sodium salt; (Sodium silicate)	1344-09-8	Not Established	Not Established
Proprietary ingredients		Not Established	Not Established

## Section 4: First Aid Measures

Route(s) of Entry- Inhalation? Yes as a mist. Skin - Yes Ingestion - Yes

Health Hazards: Note: liquid is pH 11.5.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Skin-Acute contact may cause irritation. Prolonged contact may cause burns. Chronic exposure may cause dermatitis. Ingestion may cause headache, nausea, abdominal pains. Wash with soap and water.

Remove wetted clothing. Get medical attention.

Eye contact: May cause irritation and redness. Chronic exposure may cause conjunctivitis. First aid: Eyes; Flush with fresh water for at least 30 minutes.

Ingestion; Ingestion may cause headache, nausea, and abdominal pains. If swallowed, DO NOT induce vomiting. Get medical attention immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.

Carcinogenicity: NTP - No IARC Monographs - No OSHA Regulated- No

Control Measures:

Respiratory Protection : Not Required for most conditions. Use mist respirator in enclosed areas.

Ventilation Local Exhaust- Not Required

Special Measures- Not Required

Mechanical-Not Required

Other control measures: Not Required

Protective Gloves- Use chemical resistant rubber gloves.

Eye Protection- Use chemical splash goggles

Other Protective Clothing or Equipment- Wear body covering protective clothing and rubber boots.

Work/Hygienic Practices: Wash hands/exposed skin after use.

Remove contaminated or wetted clothing.

Section 5: Fire Fighting Measures

(See also Section 2 Hazards and Section 9: Physical and Chemical Properties)

Flammable properties: Noncombustible.

Unusual Fire and Explosion Hazards: See Section 2 Hazards.

Extinguishing Media -This material is compatible with all extinguishing media

Protection of Firefighters: Standard protective equipment and precautions.

Specific hazards arising from the chemical: Hazardous Decomposition or byproducts At elevated temperature will rapidly attack magnesium liberating hydrogen gas. Reacts with acids, reactive metals and some organics.

Hazardous Polymerization: Will Not Occur

NFPA 704: National Fire Protection Association Health - 1 Fire - 0 Reactivity - 0

0 = minimal hazard, 1= light hazard, 2=moderate hazard, 3=severe hazard, 4=extreme hazard

Section 6: Accidental Release Measures

Personal precautions: Avoid wetting clothing or excessive handling of wetted absorbent materials. Use chemical goggles, chemical resistant gloves and boots.

See Section 4: First Aid Measures - Control measures.

Methods of containment:

Small spills- Product may be picked up with any absorbent material (eg. sawdust). Spills are slippery.

Large spills- Isolate hazard area and deny entry. Do not touch or walk through spilled material. Stop leak if without risk. Prevent runoff from entering storm sewers and ditches leading to

waterways. Isolate and store discharged material. Use sand or earth to contain spilled material. If containment is impossible, neutralize contaminated area and flush with large quantities of water.

Methods for cleanup: Clean up equipment and spills with soap and water.

Other information: No CERCLA Reportable Quantity accidental release reporting is required.

There is a general need for Personal Protective Equipment (PPE). See Section 8 Exposure Controls/Personal Protection for instructions.

#### Section 7: Handling and Storage

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing spray mist. Keep container closed. Promptly clean residue from closures with cloth dampened with water. Promptly clean up spills. Spills are slippery. Reacts with acids, reactive metals and some organics.

Spray only through clean, properly maintained compressor, air tanks, hoses, regulators and nozzles. Brushes or rollers should be clean. Remove wet clothing. Wash thoroughly after use.

Storage: Keep containers closed. Store in clean steel or plastic containers. Separate from acids, reactive metals, and ammonium salts. Do not store in aluminum, fiberglass, copper, brass, zinc or galvanized containers. Store between 3° C (38° F) and 41° C (105° F). Avoid direct sunlight. Shelf life 2 years. Keep from freezing.

#### Section 8: Exposure Controls / Personal Protection

Exposure guidelines: Hazardous Components-(Specific Chemical Identity, Common Name(s))  
OSHA PEL N.E.    ACTIH TLY N.E.    Other Limits % N..    (N.E. - Not Established)

Engineering controls: No specific controls are needed to control exposures.

Ventilation controls: None required.

Personal protective equipment (PPE) - normal use and handling where the exposure potential has been determined:

Note: This product has an alkaline pH of 11.5.

Respiratory Protection : NIOSH dust and mist respirator where mist is present.

Wear OSHA specified respirator in enclosed areas. (OSHA 29CFR1910.134)

Protective Gloves- Use chemical resistant rubber gloves.

Eye Protection- Use chemical splash goggles

Other Protective Clothing or Equipment- Wear body covering clothing, rubber boots.

Work/Hygienic Practices: Wash hands and exposed skin after use. Remove contaminated or wetted clothing and launder.

Personal protective equipment (PPE) - reasonable foreseeable use or misuse (e.g.-emergency situations) where the potential for exposure is not well defined:

Full fire fighting universally requires full respiratory protection (SCBA) and full fire fighting turnout gear (Bunker gear) to protect the wearer from a variety of hazards.

Crystal Lok® is applied onto concrete structures which may contain surface equipment, machinery or other materials including engines, fuels, rubber, plastics, etc. requiring hazard protection.

#### Eye/face protection:

Eye protection Use chemical splash goggles in enclosed area and where blast-back can occur, or where wind can cause exposure or where working overhead.

Skin protection: Wear chemical resistant clothing including rubber gloves, boots, nonabsorbent whole body suits appropriate to coatings applications, as indicated by the sites exposure potential of associated equipment, used in applying Crystal-lok® and weather.

Respiratory Protection: Use a NIOSH approved dust and mist respirator where spray mist occurs. Observe OSHA regulations for respirator use (29 C.F.R. §1910.134)

#### General hygiene considerations:

There are no known hazards associated with this material when used as recommended. The

following general hygiene considerations are recognized as common good industrial practices.

While Crystal Lok® may present no obvious hazard to health or environment, there are some general hygiene considerations that are practiced by industry and are generally applicable to industrial situations. such considerations may include;

Avoid breathing vapor or dust.

Avoid contact with eyes and skin.

Wash thoroughly after handling and before eating and drinking.

Preparation of concrete surfaces may cause hazardous conditions. If you scrape, sand, or remove rust or old paint, you may release lead dust. Lead is toxic. Exposure to lead dust can cause serious illness, such as brain damage, especially in children. Pregnant women should also avoid exposure. Wear a NIOSH approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to [www.epa.gov/lead](http://www.epa.gov/lead).

These general hygiene considerations are not material specific. They are placed here to avoid diminishing the importance of the material specific recommendations.

#### Section 9: Physical and Chemical Properties

Appearance: Watery clear liquid

Odor: No odor or musty.

Odor threshold: Not Available

Physical state: Water based unpigmented aqueous sodium silicate, penetrating aids and defoamers.

pH 11.5 - alkaline

Freezing point: 32 degrees F. ( 0° C)

Boiling Point 212° F (100° C)

Boiling range Not Available

Flash Point Over 200°F(tcc) (Over 93° C)

Evaporation Rate Not Available

Flammability Not Flammable

Upper/lower flammability or explosive limits Not Applicable

Vapor Pressure Not Applicable

Vapor Density Not Applicable

Specific Gravity (H2O=1) 1.02

Solubility in Water 100% Dispersible

Partition coefficient: n-octanol/water Not Available

Auto-ignition temperature Not Available

Decomposition temperature Not Available

Volatile organic compounds VOC (ASTM D3960) <0.01 gms/L

#### Section 10: Stability and Reactivity

Chemical stability: Stability under normal ambient temperature and pressure or anticipated storage and handling conditions.

Stable X

Conditions to Avoid: Contact with strong acids may produce a sudden elevation of temperature.

Do Not Store in contact with aluminum, tin, lead, zinc.

Hazardous decomposition product: hydrogen.

Incompatibility (Materials to Avoid) Gels and generates heat when mixed with acid. May react with ammonium salts resulting in evolution of ammonia gas. Flammable hydrogen gas may be produced

on contact with aluminum, tin, lead, and zinc. Decomposition produces hydrogen.

Hazardous Polymerization - Will Not Occur

Conditions to Avoid- Aluminum, tin, lead, zinc, acids.

See Section 7: Handling and Storage for appropriate proper handling and storage.

#### Section 11: Toxicological Information

Not Available See Section 2 - Hazards Identification and Section 6: Accidental Release Measures.

#### Section 12: Ecological Information

Sinks and mixes with water. High pH is harmful to aquatic life. This material is not persistent in aquatic systems. Diluted material rapidly depolymerizes to yield dissolved silica that is indistinguishable from natural dissolved silica. Does not bioaccumulate except in species that use silica as a structural material such as diatoms and siliceous sponges. Where abnormally low natural silica concentrations exist (less than 0.1 ppm), dissolved silica may be a limiting nutrient for diatoms and a few other aquatic algal species. However, the addition of excess dissolved silica over the limiting concentration will not stimulate the growth of diatom populations; their growth rate is independent of silica concentration once the limiting concentration is exceeded. Neither silica nor sodium will appreciably bioconcentrate up the food chain. See Section 2 - Hazards Identification and Section 6: Accidental Release Measures.

#### Section 13: Disposal Considerations Not a hazardous waste.

Any convenient method acceptable, i.e. commercial sewer or septic tank, etc.

#### Section 14. Transport information

DOT UN Classification: 55 This material is not regulated hazardous material for transportation.

No Shipping Restrictions.

#### Section 15: Regulatory Information

CERCLA: No CERCLA Reportable Quantity has been established for this material.

SARA TITLE III: Not an Extremely Hazardous Substance under §302. Not a Toxic Chemical under §313.

Hazard Categories under §§311/312: Acute

FDA: The use of sodium silicate is authorized by FDA as a boiler water additive for the production of steam that will contact food pursuant to 21 CFR §173.310; as a component of zinc-silicon dioxide matrix coatings on food contact surfaces pursuant to 21 CFR §175.390(c); as a GRAS substance when migrating from cotton fabric used in dry food packaging pursuant to 21 CFR §182.70; and as a GRAS substance when migrating to food from paper and paperboard products pursuant to 21 CFR §182.90.

#### TRI Reporting:

TSCA: United States Included

40 CFR 372 none

OSHA 29 CFR 1910 none

EPA-CEPPO none

EPCRA none

RCRA none

RMP none

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins under California Proposition 65 at levels which would be subject to the proposition.

Crystal Lok® container label text:

**DIRECTIONS FOR USE**

**SURFACE PREPARATION:** Crystal-Lok should be applied to concrete that is free of paint, wax, oil, dirt and dust. If previous sealer has been applied, it must be removed before Crystal-Lok can be used.

**APPLICATION:** Crystal-Lok must be mixed thoroughly before using and kept agitated. It is best applied with airless spray, but a brush or roller can also be used. Ideal application is in two light coats applied at 300-400 square feet per gallon. One coat coverage should be about 200-300 square feet per gallon or less depending upon the porosity of the concrete. If liquid remains behind the spray nozzle, move the nozzle faster. Broom or trowel finish determines application rate. Good concrete should have a pH of 12-13, if it is below pH 10 future problems will occur with rusting of reinforcement steel. Can be applied when temperature is 38°F. and rising or 100°F. and falling. Moisten hot surfaces with water to break surface tension before applying.

**CAUTION:** Do not thin. Do not allow Crystal-Lok to puddle or allow water to stand on the surface immediately after application. Puddles can cause a residue, a white powder, that is extremely difficult to remove. Rinse the surface thoroughly after application whenever possible. Intended for use on surface in which Portland cement is used; concrete, stucco, blocks, beams, etc. Crystal-Lok is effective on weeping concrete walls and basements if there is no paint on the concrete. One application is normally enough and results are evident within 24 hours. Do not spray on glass or aluminum as it will etch the surface. Rinse immediately if glass or aluminum is sprayed. Do not apply to Clay Brick.

**WARRANTY:** Manufacturer's liability is limited to the replacement or refund of purchase price. Shelf life is indefinite and is not affected by freezing or extremes of heat or humidity. If frozen, Crystal-Lok must be thawed completely and mixed before use. Does not repair structural cracks.

**CAUTION:** pH 11.5 alkaline. Avoid contact with skin and eyes. In case of contact, flush immediately with plenty of water. If irritation continues, call a physician.

If swallowed, DO NOT induce vomiting and call a physician.

**KEEP OUT OF REACH OF CHILDREN.**

**MADE IN U.S.A.**

**Preparation and Revision Information:**

This document is revised December 15, 2006, replacing April 15, 2006 to incorporate ANSI MSDS specifications, as a larger body of data from that specified by OSHA.

For Product Data and Technical Data including SURFACE STANDARDS AND SPECIFICATIONS and APPLICATION GUIDES, see the appropriate PDF documents available on the web page [www.crystal-lok.com](http://www.crystal-lok.com) for the product Crystal Lok® Concrete Waterproofer/Hardener

THE DATA AND COMMENTS PRESENTED HERE ARE BELIEVED TO BE ACCURATE AND BEST DATA AVAILABLE AND IS INTENDED AS AN AID AND GUIDE FOR REFERENCE TO THE REQUIRED OSHA PRECAUTIONS AND DOCUMENTATION OF OSHA MSDS REQUIREMENTS FOR HANDLING CHEMICALS BY A TRAINED CHEMICAL HANDLER. THE INFORMATION CONTAINED IN THIS DOCUMENT APPLIES TO THIS SPECIFIC MATERIAL AS SUPPLIED. IT MAY NOT BE VALID FOR THIS MATERIAL IF IT IS USED IN COMBINATION WITH ANY OTHER MATERIALS. IT IS THE USER'S RESPONSIBILITY TO SATISFY ONESELF AS TO THE SUITABILITY AND COMPLETENESS OF THIS INFORMATION FOR HIS OWN PARTICULAR USE. THERE IS NO WARRANTY EXPRESSED OR IMPLIED RELATING TO MERCHANTABILITY OR SUITABILITY FOR ANY SPECIFIC PURPOSE OR APPLICATION OR OF CONTENT HEREIN AND NO LIABILITY IS ASSUMED RESULTING FROM HANDLING AND USE OF THE PRODUCT DESCRIBED IN THIS DOCUMENT, PURCHASERS AND USERS OF CRYSTAL-LOK® SHALL DETERMINE SUITABILITY OF THIS INFORMATION FOR THEIR OWN REQUIREMENTS.