

**Section 1. Product and Company Identification**

**Product Name:** Pentra-Shield®

**Product use:** Concrete Surface Hardening Densifier  
with Anti-Scale and Freeze-Thaw Protection

**Effective Date:** January 1, 2017

Replaces: October 13, 2013

**Manufacturer Information:** Convergent Concrete Technologies  
115 North 1380 West  
Orem, UT 84057  
Telephone number: 801-375-2280

**USA Emergency Phone Number:**

**INFOTRAC (24-hr/7 days): 1-800-535-5053**

**Outside the United States: Call collect 1-352-323-3500**

**For Medical Emergency: Call 1-800-535-5053**

**Section 2. Hazard Identification**

**GHS Pictograms:**

**GHS Signal Word:** WARNING

This product is alkaline. Avoid contact with eyes and skin. Keep out of reach of children.

The product may be harmful if it is inhaled or swallowed.

**POTENTIAL HEALTH EFFECTS:**

**CODE OF HAZARD STATEMENTS:**

**Physical hazards**

None.

**Health Hazards**

H303-may be harmful if swallowed.

H312-Harmful in contact with skin.

H319-Causes serious eye irritation.

H333-May be harmful if inhaled.

**Environmental hazards**

None.

**CODE OF PRECAUTIONARY STATEMENTS:**

**General**

P101-Keep out of reach of children.

P103-Read label before use.

**Prevention statements**

P202-Do not handle until all safety precautions have been read and understood.

P262-Do not get in eyes, on skin or on clothing.

P264-Wash thoroughly after handling using this product.

P280-Wear protective gloves/protective clothing/eye protection/face protection.

P284-Wear respiratory protection.

**Response statements**

P312-Call a POISON CENTER or doctor/physician if you feel unwell.

P331-DO NOT induce vomiting.

P340, Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P352, Wash with plenty of soap and water.

P362, Take off contaminated clothing and wash before reuse.

**Storage**

P403-Store in well-ventilated place.

P404-Store in a closed container.

**ROUTES OF ENTRY:** Eye contact, skin adsorption, ingestion and inhalation.

**CARCINOGENICITY:** None known at this time.

### Section 3. Ingredients and Hazards Identification

<b>Components</b>				
Component	CAS #	EINECS No	% by weight	REACH Reg. #
Silane	Prop.	Prop.	1-10	No
Silane	Prop.	Prop.	1-10	Yes
Lithium Silicate	12627-14-4	235-730-0	10-50	Yes
Water	7732-18-5	231-791-2	Balance	No

REACH Registration number is the EINECS # and CAS#: lithium silicate is 23573001267144.

### Section 4. First Aid Measures

**Eye Contact:** Flush eyes with water immediately while holding eyelids open. Remove contacts, if worn, after initial flushing and continue flushing for at least 15 minutes. Seek medical attention if irritation persists.

**Skin Contact:** Use soap and water to remove from the skin, remove contaminated clothing, clean thoroughly before reuse.

**Inhalation:** Move to fresh air. If not breathing, give rescue breathing. If breathing is difficult, give oxygen. Seek medical attention if breathing is still difficult.

**Ingestion:** If swallowed, get medical attention immediately. **DO NOT INDUCE VOMITING.** Never give anything by mouth to an unconscious person.

### Section 5. Fire Fighting Measures

Flash Point: Not flammable

Flammability Limits: NE

Fire Fighting Media: Dry chemical, carbon dioxide, and water spray.

Special Fire Fighting Procedures: First responders need to wear full-bunker gear with SCBA, never enter a confined space unless fully protected with proper personal protective equipment (PPE). Material is alkaline and may cause the floor to be slippery.

### Section 6. Accidental Release Measures

**Clean-up Procedures:** Material is alkaline wear proper PPE. Stop the source of the release if you are not put at risk. Use absorbent material (such as sand or kitty litter) to absorb the spill, use plastic shovel to pick up absorbent for disposal.

**Spills and Leaks:** Dispose in accordance to local, state or federal regulations.

### Section 7. Handling and Storage

**Handling:** Do not get into eyes. Do not taste or swallow. Wash thoroughly after handling.

**Storage:** Store in original labeled container. Keep in cool and dry areas.

### Section 8. Exposure Control/Personal Protection

**Introductory Remarks:** Consider the potential hazards of this product outlined in section 3. Use process exposures such as local exhaust ventilation, to control over exposure to airborne levels above recommended exposure limits.

**Personal Protection:**

**Eyes:** Wear safety goggles or safety glasses to prevent eye contact.

**Body:** Long sleeve shirts, long pants, socks, rubber boots and chemical resistant gloves.

**Hands:** Chemical resistant gloves

**Respiratory:** Wear an approved respirator (NIOSH TC-84A rated or EN 14387) that provides protection from this product if the airborne concentrations exceed the recommended exposure limits. **Other:** None

### Section 9. Physical and Chemical Properties

<b>Odor/Color</b>	Slight to none / green tint, dries clear	<b>Vapor Pressure</b>	< 2.2 torr @ 68 °F (20 °C)
<b>pH</b>	11-12	<b>Density(water=1)</b>	1.056 @ 68°F (20 °C)
<b>VOC</b>	< 50g/L	<b>Solubility</b>	> 95 % in water
<b>Evaporation rate(water=1)</b>	< 1.0	<b>Boiling Point</b>	212 °F (100 °C)
<b>Freezing point</b>	0 °C (32 °F)	<b>Vapor density (air=1)</b>	> 1

### Section 10. Stability and Reactivity

**Chemical Stability:** Considered stable under normal ambient temperatures.

**Hazardous Decomposition:** If complete combustion, oxides of carbon and silicates are formed.

**Hazardous Polymerization:** Will not occur.

**Incompatibility~ Materials to Avoid:** May react with strong oxidizing agents and strong acids.

### Section 11. Toxicological Information

**Acute Eye Irritation:** Irritating.

**Acute Skin Irritation:** Chronic exposure may be irritating.

**Acute Dermal Toxicity:** Not expected to be toxic through the skin.

**Acute Inhalation Toxicity:** Not determined, expected to be an irritant to the respiratory system.

**Carcinogenic Effects:** None

**Existing Medical Conditions Aggravated by Exposure:** Exposure to eyes and skin may cause irritation to pre-existing conditions.

### Section 12. Ecological Information

**Ecotoxicity:** The toxicity of this product has not been determined.

**Environmental Fate:** This product should be expected to be readily biodegradable.

### Section 13. Disposal Considerations

**Waste Disposal Method:** What ever cannot be saved for recovery or recycling should be managed by the local, state or Federal Regulations.

**Container Handling and Disposal:** All containers should be triple rinsed and disposed of according to local, state and Federal regulations.

### Section 14. Transport Information

**Ground Classification:** Not regulated by US DOT

**Shipping Name:** Pentra-Shield®

**Technical Shipping Name:** None

**UNFIC:** None

**ID Number:** None

**Packaging Group:** None

**Labels:** No US DOT Labels

**Not regulated by IATA or IMO**

<b>Section 15. Regulatory Information</b>
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EPCRA 311/312 Categories: Immediate (Acute) Health Effects: Yes  
 Delayed (Chronic) Health Effects: Yes  
 Fire Hazard: No  
 Sudden Release of Pressure: No  
 Reactivity: No

European Community:  irritating (Xi) substances

Right to know classification: All ingredients are listed in CA, FL, MA, MI, MN, PA and NJ.

TSCA: All ingredients listed or exempt from listing.

Reportable Quantity (RQ): None

Prop. 65: None

WHMIS: Xi (Irritant to the eyes and skin)

All ingredients are listed as chemical inventories of ACIS, ECL, EEC, ENCS, EU, Israel, MAC, MAK, MITI,

PICCS, SWISS, Taiwan, USA and UK

**ABBREVIATIONS:**

CAS #	Chemical Abstract Service Number	EINECS	European Inventory of existing Commercial Chemical Sales
°C	Celsius temperature scale	°F	Fahrenheit temperature scale
Prop.	Proprietary	PE	Personal Protective Equipment
TLV	Threshold Limit Value	TWA	Time Weighted Average
STEL	Short-term Exposure Limit	PEL	Permissible Exposure Limit
OSHA	Occupational Safety & Health	NIOSH	National Institute of Safety & Health
NFPA	National Fire Protection Agency	WHMIS	Workplace Hazardous Materials Information System
NTP	National Toxicology Program	IARC	Int. Agency for Research on Cancer
RCRA	Resource Conservation Recovery Act	TSCA	Toxic Substance Control Act
EC50	Effective Dose	LC50	Lethal Inhalation Concentration
LD50	Lethal Dose	CAS	Chemical Abstract Service Number
LEL	Lower explosive limit	UEP	Upper explosive limit
NDA	No Data Available	ND	Not determined
NE	None established	NA	Not Applicable
<	Less Than or Equal To	>	Greater Than or Equal To
CNS	Central Nervous System	CI	China
DSL	Canada	ECL	Korean Existing Chemicals List
EEC	European Economic Commission	ENCS	Japanese Existing and New Chemical List
EU	European Union	MAC	Netherlands
MAK	Germany	MITI	Japan
PICCS	Philippines	SWISS	Giftliste 1
UK	United Kingdom	USA	United States
VOC	Volatile organic content	ACGIH	American Conference of Government Industrial Hygienists
SARA	Superfund Amendments and Reauthorization Act		
AICS	Australian Inventory of Chemical Substances		
IARC	International Agency for Research on Cancer		
Taiwan	List of Toxic Chemical Substances regulated under Taiwan Toxic Chemical Substances Control Act of 1086		

**Section 16. Other Information**

**Hazardous Material Information (HMIS)**

**National Fire Protection Association (NFPA)**

Health	1	1	Health
Fire	0	0	Fire
Reactivity	0	0	Instability
Personal Protection	C		NA

Health                    4 Deadly 3 Extreme Danger 2 Dangerous 1 Slight hazard 0 No hazard  
 Fire                      4 < 73 °C 3 < 100 °C 2 < 200 °C 1 >200 °C 0 Will not burn  
 Reactivity/Instability 4 – May detonate 3 Explosive 2 Unstable 1 Normally stable 0 Stable

**Risk phrases:** R36, Irritating to eyes; R37, Irritating to respiratory system; and R38, Irritating to skin.  
**Safety phrases:** S2, Keep out of reach of children; S24, Avoid contact with skin; S25, Avoid contact with eyes; S37, Wear suitable gloves; and S39, Wear eye/face protection.

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