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Phone: 303.567.4871  
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## Safety Data Sheet

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### Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

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#### 1.1 Product identifier

<b>Product Name</b>	<b>Shot-Set 250 Liquid Accelerator</b>
<b>Alternative Names</b>	<b>Modified Liquid Sodium Silicate SS250 (Shot Set 250)</b>
<b>CAS No.</b>	<b>1344-09-S</b>

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

<b>Identified use(s)</b>	<b>General industrial chemical for use in a wide range of applications.</b>
<b>Uses advised against</b>	<b>Applications: Concrete Accelerator None known</b>

#### 1.3 Details of supplier of the safety data sheet

<b>Company Identification</b>	<b>Shotcrete Technologies, Inc. PO Box 3274 1431 Miner Street Idaho Springs, CO 80452 USA</b>
<b>Telephone:</b>	<b>303-567-4871</b>
<b>E-Mail (competent person)</b>	<b><a href="mailto:info@shotcretetechnologies.com">info@shotcretetechnologies.com</a></b>

#### 1.4 Emergency telephone no. 303-567-4871

### Section 2: HAZARDS IDENTIFICATION

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#### 2.1 Classification of the substance of mixture

<b>GHS Classification</b>	<b>Skin Irritation Eye Irritation</b>
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<b>Hazards summary</b>	<b>Alkaline Irritating to eyes and skin. Spilled material is slippery</b>
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## 2.2 Label Elements

<b>Hazard Pictogram(s)</b>	<b>N/A</b>
<b>Signal word(s)</b>	<b>Warning</b>
<b>Hazard statement(s)</b>	<b>H315: Causes skin irritation H319: Causes serious eye irritation</b>
<b>Precautionary statement(s)</b>	<b>P262: Do not get in eyes, on skin, or on clothing P280: Wear protective gloves/protective clothing/eye protection/face protection P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</b>
<b>2.3 Other hazards</b>	<b>Not Applicable</b>

## Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

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### Regulation (EC) No. 1272/2008 (CLP)

<b>Ingredient(s)</b>	<b>% W/W</b>	<b>CAS No.</b>	<b>EINECS No./REACH Registration</b>	<b>Hazard Symbol(s) &amp; Hazard Statement(s)</b>
<b>Silicic Acid, Sodium Salt</b>	<b>78- 82</b>	<b>1344- 09-8</b>	<b>215-687-4</b>	<b>H315: Skin Irrit.2; H319: Eye Irrit.2</b>
<b>Water</b>	<b>22- 18</b>	<b>7732- 18-5</b>	<b>231-791-2</b>	

## Section 4: FIRST AID MEASURES

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<b>4.1 Eye Contact</b>	<b>Irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 15 minutes. Obtain immediate medical attention.</b>
<b>Skin Contact</b>	<b>Wash affected skin with plenty of water. If symptoms develop, obtain medical attention.</b>
<b>Inhalation</b>	<b>Remove patient from exposure, keep warm and at rest. Obtain medical attention.</b>
<b>Ingestion</b>	<b>Do not induce vomiting. Wash out mouth with water and give 200-300ml (half a pint) of water to drink. Obtain medical attention.</b>
<b>4.2 Most important symptoms and effects, both acute and delayed</b>	<b>Alkaline. Irritating to eyes and skin. The toxicity of sodium silicate is dependent on the silica to alkali ratio on the pH</b>
<b>4.3 Indication of any immediate Medical attention and special treatment needed</b>	<b>Obtain immediate medical attention</b>

## **SECTION 5: FIRE-FIGHTING MEASURES**

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### **5.1 Extinguishing media**

**Suitable Extinguishing Media**      **Compatible with all standard firefighting techniques**

**Unsuitable extinguishing Media**      **None known**

**5.2 Special Hazards arising from the substance or mixture**      **Not applicable. Aqueous solution. Non-combustible**

**5.3 Advice for fire-fighters**      **None**

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

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**6.1 Personal precautions, Protective equipment and Emergency procedures**      **Wear suitable protective clothing. Wear eye/face protection.**

**6.2 Environmental precautions**      **Do not allow to enter drains, sewers or watercourses. Advise authorities if spillage has entered water course or sewer or has contaminated soil or vegetation**

**6.3 Methods and materials for Contamination and cleaning up**      **Caution – spillages may be slippery. Contain spillages with sand, earth or any suitable absorbent material. Transfer to a container for disposal or recovery.**

**6.4 Reference to other sections**      **See also Section 8**

## **SECTION 7: HANDLING AND STORAGE**

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**7.1 Precautions for safe Handling**      **Avoid contact with eyes, skin and clothing**  
**Avoid generation of mist. Provide adequate ventilation**  
**Emergency shower and eye wash facilities should be readily available**  
**See also Section 8**

**7.2 Condition for safe storage Including any incompatibilities**      **Storage temperature 45-95 degrees F.**  
**Loading temperatures 45-95 degrees F.**  
**Do not allow material to freeze**  
**Provide an adequate bund wall**  
**Unsuitable containers: Aluminum**  
**See also section 10**

**7.3 Specific end use(s)**      **See also Annex to the extended Safety Data Sheet**

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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### 8.1 Control parameters

SUBSTANCE	Occupational Exposure Limits
Silicic acid, sodium salt	No Occupational Exposure Limit assigned. An exposure limit of 2 mg/m <sup>3</sup> (15 min TWA) is recommended by analogy with sodium hydroxide (UK #H40).

### 8.2 Exposure controls

Wear protective equipment to comply with good occupational hygiene practice. Do not eat, drink or smoke at the work place.

#### 8.2.1 Appropriate engineering Controls

Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust) and control of process conditions.

#### 8.2.2 Personal Protection Respiratory Protection

Respiratory protection not normally required. Advice on respiratory protective equipment is given in the HSE (Health and Safety Executive) publication HS(G)53.

#### Eye/Face protection Skin Protection

Chemical Goggles (EN 166)  
Wear suitable protective clothing and gloves. Plastic or rubber gloves. For example EN674-3, level 6 breakthrough time (>480 min). Wear suitable overalls.

#### 8.2.3 Environmental Exposure Controls

The primary hazard of sodium silicate is the alkalinity. Avoid release to the environment.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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### 9.1 Information on basic physical and chemical properties

Appearance	Liquid. Almost colorless
Odor	Odorless
Odor Threshold (ppm)	Not applicable
pH (Value)	Alkaline. 11-12
Freezing Point (F)	34
Melting Point (F)	Not applicable
Boiling Point (F)	100
Flash Point (F)	Not applicable
Evaporation rate	Not Applicable
Flammability (solid, gas)	Not Applicable
Explosive Limit Ranges	Not Applicable

<b>Vapor Pressure (mm Hg)</b>	<b>Not Applicable</b>
<b>Vapor Density (Air=1)</b>	<b>No data</b>
<b>Specific Gravity (g/ml)</b>	<b>1.3</b>
<b>Solubility (Water)</b>	<b>Soluble</b>
<b>Solubility (Other)</b>	<b>No data</b>
<b>Partition Coefficient</b>	<b>No data</b>
<b>Auto Ignition Point (F)</b>	<b>Not Applicable</b>
<b>Decomposition Temperature (C)</b>	<b>Not Applicable</b>
<b>Viscosity (mPa. S)</b>	<b>Not Applicable</b>
<b>Explosive properties</b>	<b>Not Applicable</b>
<b>Oxidizing Properties</b>	<b>Not Applicable</b>
<b>9.2 Other information</b>	<b>No data</b>

## **SECTION 10: STABILITY AND REACTIVITY**

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<b>10.1 Reactivity</b>	<b>See Section: 10.3</b>
<b>10.2 Chemical Stability</b>	<b>Stable</b>
<b>10.3 Possibility of hazardous reactions</b>	<b>When arc welding vessels containing aqueous solutions of this material, take care to control any explosion risk from hydrogen evolved by electrolysis. Aqueous solutions will react with aluminum, zinc, tin and their alloys evolving hydrogen gas which can form an explosive mixture with air. Can react violently if in contact with acids. Can react with sugar residues to form carbon monoxide</b>
<b>10.4 Conditions to avoid</b>	<b>See Section: 10.3</b>
<b>10.5 Incompatible Materials</b>	<b>See Section: 10.3</b>
<b>10.6 Hazardous decomposition Product(s)</b>	<b>Non known.</b>

## **SECTION 11: TOXICOLOGICAL INFORMATION**

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<b>11.1 Information on toxicological effects</b>	
<b>Acute toxicity</b>	
<b>Ingestion</b>	<b>All symptom of acute toxicity are due to high alkalinity. Material will cause irritation. Oral LD50(rat) 3400 mg/kg bw</b>
<b>Inhalation</b>	<b>Mist is irritant to the respiratory tract. All symptoms of acute toxicity are due to high alkalinity. Inhalation LC50 (rat)&gt;2.06 g/m<sup>3</sup></b>
<b>Skin Contact</b>	<b>Material will cause irritation. Dermal LD50 (rat)&gt;5000mg/kg bw</b>
<b>Eye Contact</b>	<b>Material will cause irritation.</b>
<b>Skin Corrosion/irritation</b>	<b>Irritating to skin</b>
<b>Serious eye damage/irritation</b>	<b>Irritating to eyes</b>
<b>Sensitization</b>	<b>Not sensitizing</b>

<b>Mutagenicity</b>	<b>No evidence of genotoxicity. In vitro/in vivo negative</b>
<b>Carcinogenicity</b>	<b>No structural alerts. IARC, NTP, OSHA, ACGIH do not list this product as a known or suspected carcinogen.</b>
<b>Reproductive toxicity</b>	<b>No evidence of reproductive toxicity or developmental toxicity</b>
<b>STOT – single exposure</b>	<b>Not classified</b>
<b>STOT – repeated exposure</b>	<b>Not classified. NOAEL oral (rat)&gt;159mg/kg bw/d</b>
<b>Aspiration hazard</b>	<b>Not classified</b>
<b>Other information</b>	<b>No data</b>

## **SECTION 12: ECOLOGICAL INFORMATION**

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<b>12.1 Toxicity</b>	<b>Fish (Brachydanio rerio) LC50 (96 hour) 1108 mg/l</b>
<b>12.2 Persistence and Degradability</b>	<b>Inorganic. Soluble silicates, upon dilution, rapidly depolymerize into molecular species indistinguishable from natural dissolved silica.</b>
<b>12.3 Bio accumulative potential</b>	<b>Inorganic. The substance has no potential for bioaccumulation.</b>
<b>12.4 Mobility in soil</b>	<b>Not applicable</b>
<b>12.5 Results of PBT and vPvB Assessment</b>	<b>Not classified as PBT or vPvB</b>
<b>12.6 Other adverse effects</b>	<b>The alkalinity of this material will have a local effect on ecosystems sensitive to changes in pH</b>

## **SECTION 13: DISPOSAL CONSIDERATIONS**

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<b>13.1 Waste treatment methods</b>	<b>Dispose of this material and its container to hazardous or special waste collection point Disposal should be in accordance with local, state or national legislation.</b>
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## **SECTION 14: TRANSPORT INFORMATION**

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<b>14.1 UN number</b>	<b>Not classified according to the United Nations 'Recommendations on the Transport of Dangerous Goods'. Not classified as hazardous under DOT or US Transport Recommendations International Maritime Dangerous Goods (IMDG) Code: Not classified as hazardous</b>
<b>14.2 Proper Shipping Name</b>	<b>Not Applicable</b>
<b>14.3 Transport hazard Class (es)</b>	<b>Not Applicable</b>
<b>14.4 Packing Group</b>	<b>Not Applicable</b>
<b>14.5 Environmental hazards</b>	<b>Not classified as a Marine Pollutant</b>
<b>14.6 Special precaution for user</b>	<b>Unsuitable containers: Aluminum</b>
<b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC code</b>	<b>Not Applicable</b>

## **SECTION 15: REGULATORY INFORMATION**

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**15.1 Safety, health and environmental regulations/legislation specific for the substance of mixture**

<b>TSCA Inventory Status:</b>	<b>Reported/Included</b>
<b>AICS Inventory Status:</b>	<b>Reported/Included</b>
<b>DSL/NDSL Inventory Status:</b>	<b>Reported/Included SARA TITLE III: Not an Extremely Hazardous Substance under Sec. 302. Not a toxic Chemical under Sec 313. Hazard Categories under Sub Sec 311/312: Acute</b>

**German Water Hazard Classification VwVwS: Product ID number 1314, WGK class 1 (low hazard to water)**

**HMIS (Hazardous Material Information System) 2,0,0**

**15.2 Chemical Safety Assessment – Information available on request.**

## **SECTION 16: OTHER INFORMATION**

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**Data referenced in the DSD is from company-owned information and from data legitimately accessed by Shotcrete Technologies. This includes data relating to toxicology, ecotoxicology, DNELs, PNECs and other information in the SDS.**

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