SECTION I - GENERAL INFORMATION
PRODUCT NAME: Sodium Silicate, Liquid
ITEM NUMBER: 100273, 411197, 411180
CHEMICAL DESCRIPTION: Aqueous sodium silicate
PRODUCT USE: CMT extender
SUPPLIER: BJ Services Company
ADDRESS: 11211 FM 2920
Tomball, TX 77375
EMERGENCY TELEPHONE NUMBER (800)424-9300 for CHEMTREC
(202)483-7616 Alaska and International
PREPARED BY: BJ Services Environmental Group
(281)351-8131
DATE PREPARED: November 10, 2000 Supersedes: December 1992

HMIS HAZARD INDEX
HEALTH: 3
FLAMMABILITY: 0
REACTIVITY: 1
PERSONAL PROTECTION: j

SECTION II - HAZARDOUS COMPONENTS

<table>
<thead>
<tr>
<th>HAZARDOUS COMPONENTS</th>
<th>CAS #</th>
<th>PERCENT</th>
<th>HAZARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aqueous sodium silicate may be treated as caustic</td>
<td>1344-09-8</td>
<td>38.3%</td>
<td>Eye and skin irritant</td>
</tr>
</tbody>
</table>

SECTION III - FIRE AND EXPLOSION HAZARD DATA

FLASHPOINT (METHOD): N.A.
UPPER EXPLOSION LIMIT(% BY VOL): N.A.
LOWER EXPLOSION LIMIT(% BY VOL): N.A.
AUTO-IGNITION TEMPERATURE: N.A.
EXTINGUISHING MEDIA: Use appropriate medium for surrounding fire
SPECIAL FIRE FIGHTING PROCEDURES: Protective clothing for skin and eye protection should be worn.
EXPLOSION DATA: N.A.
HAZARDOUS COMBUSTION PRODUCTS: None
SECTION IV - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: Skin and eye contact, inhalation, ingestion

ACUTE OVEREXPOSURE EFFECTS:

SKIN CONTACT: Liquid is irritating to skin and may cause a rash or chemical burns. SKIN ABSORPTION: Not absorbed by skin. EYE CONTACT: Liquid and mists can cause severe irritation and damage with corneal or conjunctival ulceration. INHALATION: Vapors and mists are corrosive to mucous membranes and respiratory tract and can cause chemical pneumonia. Severe exposure may result in lung tissue damage. INGESTION: May cause severe irritation and possible tissue destruction to mucous membranes of the mouth, throat, esophagus and stomach.

CHRONIC OVEREXPOSURE EFFECTS: May result in areas of destruction of skin tissue or primary irritant dermatitis. Similarly, inhalation of vapors or mists may cause varying degrees of damage to the affected tissues and also increasing susceptibility to respiratory illness.

EXPOSURE LIMITS:

<table>
<thead>
<tr>
<th>HAZARDOUS COMPONENT</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aqueous sodium silicate may be treated as caustic</td>
<td>2mg/m3 as NaOH</td>
<td>2mg/m3 as NaOH</td>
</tr>
</tbody>
</table>

CARCINOGENICITY, REPRODUCTIVE EFFECTS:
Not listed as carcinogen - IARC, NTP, or OSHA

TERATOGENICITY, MUTAGENICITY:
No effects listed.

TOXICITY STUDIES:
LD(50) 1280 mg/kg (oral rat)
LC(50) N.E.

SECTION V - FIRST AID PROCEDURES

FOR EYES: Immediately flush eyes with large amounts of water for at least several minutes holding the lids apart to ensure flushing of the entire surface. Washing eyes within several seconds is essential to achieve maximum effectiveness. Seek medical attention.

FOR SKIN: Wash with plenty of water for at least 15 minutes. Remove soiled clothing and footwear. Wash clothing before reuse. Clean footwear before reuse. Seek medical attention if symptoms persist.

FOR INHALATION: Immediately flush with plenty of water for at least 15 minutes.

FOR INGESTION: Do not induce vomiting! Give large quantities of water. If available, give
several glasses of milk. If vomiting occurs spontaneously, keep airway clear. Seek medical attention immediately. Never give anything by mouth to an unconscious person.

SECTION VI - PHYSICAL DATA

APPEARANCE AND ODOR: Colorless turbid liquid, none to slightly soapy odor
SPECIFIC GRAVITY: 1.4 @ 20°C
VAPOR PRESSURE: N.A.
VAPOR DENSITY (air=1): Vapor is water
EVAPORATION RATE: N.A.
BOILING POINT: 212 -230°F
FREEZING POINT: 30°F
SOLUBILITY IN H2O: Complete
pH: 10.5 - 11.0

SECTION VII - REACTIVITY DATA

CHEMICAL STABILITY: Stable
INCOMPATIBLE MATERIALS: This product is alkaline - avoid contact with acidic materials.
HAZARDOUS POLYMERIZATION: Does not polymerize
HAZARDOUS DECOMPOSITION PRODUCTS: None

SECTION VIII - SPECIAL/PERSONAL PROTECTION

VENTILATION: The use of mechanical ventilation is recommended whenever this product is used in a confined space. Where engineering controls are not feasible, assure use is in an area where there is natural air movement.
RESPIRATORY PROTECTION: Cartridge or Canister Respirator Acid Gas
PROTECTIVE GLOVES: Rubber
EYE PROTECTION: Goggles
OTHER PROTECTIVE EQUIPMENT: Chemical resistant clothing. Apron. Eyewash bottles or other rinsing equipment should be easily accessible.

SECTION IX - HANDLING PRECAUTIONS

LEAK AND SPILL PROCEDURES: Dike or contain spill to prevent material from entering waterways. Pump large spills into salvage containers. Soak up residue or small spills with absorbent pads, clay, or dirt and place in salvage containers. Neutralize residue with dilute acid, flush area with water followed by liberal covering of sodium bicarbonate.
WASTE DISPOSAL: If this product becomes a waste it does not meet the requirements of a RCRA hazardous waste. Always dispose of according to local/state/federal regulations.
HANDLING & SPECIAL EQUIPMENT: Wear goggles to protect eyes. Wear rubber gloves. Wear other protective clothing where contact is possible. Wash thoroughly after handling as contact may cause burns which are not immediately painful or visible.
STORAGE REQUIREMENTS: Store in a cool, dry well-ventilated place. Store away from all
other chemicals and potential sources of contamination. Keep container tightly closed. Do not use pressure to empty container. Wash thoroughly after handling.

**SECTION X - REGULATORY INFORMATION**

**SHIPPING INFORMATION**

PROPER SHIPPING NAME: Not DOT Regulated
HAZARD CLASS: N.A.
UN/NA NUMBER: N.A.
PACKING GROUP W/ "PG": N.A.
SUBSIDIARY RISK: N.A.
REPORTABLE QUANTITY (RQ): N.A.
EMERGENCY RESPONSE GUIDE #: N.A.

**ENVIRONMENTAL INFORMATION**

**SARA TITLE III**

SECTION 302/304 This product does not contain ingredients listed as an Extremely Hazardous Substance.
SECTION 311/312 Immediate
SECTION 313 This product does not contain ingredients (at a level of 1% or greater) on the List of Toxic Chemicals.

**OTHER REGULATORY INFORMATION**

TSCA INVENTORY: All of the components in this appear on the TSCA inventory.
CALIFORNIA PROP 65: None of the chemicals on the current Proposition 65 list are known to be present in this product.

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

**Revision:** 3  **Status:** Approved & Released MSDS
Author changed from to Sue Brusenhan -- 11/02/2006
MSDS revised by Sue Brusenhan -- 11/02/2006
Revised by Sue Brusenhan -- 11/02/2006
MSDS submitted for Final Approval by Sue Brusenhan -- 11/02/2006
Final Approval by Sue Brusenhan -- 11/02/2006