Material Safety Data Sheet  
Sodium Borate, Decahydrate

Section 1 - Chemical Product and Company Identification

**MSDS Name:**  
Sodium borate, decahydrate

**Catalog Numbers:**  
LC22955

**Synonyms:**  
Borax; Sodium tetraborate decahydrate; Disodium tetraborate decahydrate.

**Company Identification:**  
LabChem Inc  
200 William Pitt Way  
Pittsburgh, PA 15238

**Company Phone Number:**  
(412) 826-5230

**Emergency Phone Number:**  
(800) 424-9300

**CHEMTREC Phone Number:**  
(800) 424-9300

Section 2 – Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1303-96-4</td>
<td>Sodium tetraborate, decahydrate</td>
<td>100</td>
</tr>
</tbody>
</table>

ISO9001:2000 Certified

Section 3 - Hazards Identification

**Emergency Overview**

**Appearance:** White solid.

**Danger:** Causes eye, skin, and respiratory tract irritation. May impair fertility. May cause harm to the unborn child.

**Target Organs:** None.

**Potential Health Effects**

**Eye:**  
May cause eye irritation.

**Skin:**  
May cause skin irritation. May be harmful if absorbed through the skin.

**Ingestion:**  
May cause irritation of the digestive tract. Human fatalities have been reported from acute poisoning.

**Inhalation:**  
May cause respiratory tract irritation.

**Chronic:**  
Chronic exposure may cause reproductive disorders and teratogenic effects.
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### Section 4 - First Aid Measures

**Eyes:**  
Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Skin:**  
Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

**Ingestion:**  
Call a poison control center. If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

**Inhalation:**  
Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Notes to Physician:**  
Treat symptomatically and supportively.

### Section 5 - Fire Fighting Measures

**General Information:**  
As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, thermal decomposition or combustion may generate irritating and highly toxic gases. Runoff from fire control or dilution water may cause pollution.

**Extinguishing Media:**  
In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam.

**Autoignition Temperature:**  
Not applicable

**Flash Point:**  
Not applicable

**NFPA Rating:**  
(estimated) Health: 2; Flammability: 0; Instability: 0

**Explosion Limits:**  
Lower: n/a  Upper: n/a

### Section 6 - Accidental Release Measures

**General Information:**  
Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:**  
Sweep up or absorb material, and then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions.
Section 7 - Handling and Storage

Handling:
Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

Storage:
Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium tetraborate, decahydrate</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs:
Sodium tetraborate, decahydrate: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes:
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:
Wear appropriate gloves to prevent skin exposure.

Clothing:
Wear appropriate protective clothing to prevent skin exposure.

Respirators:
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Solid</td>
</tr>
<tr>
<td>Color</td>
<td>White</td>
</tr>
<tr>
<td>Odor</td>
<td>None reported</td>
</tr>
<tr>
<td>pH</td>
<td>9.5 (5% sol.)</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>1575°C</td>
</tr>
<tr>
<td>Freezing/Melting Point</td>
<td>741°C</td>
</tr>
</tbody>
</table>
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Decomposition Temperature: Not available
Solubility in water: Soluble in water
Specific Gravity/Density: 1.73 (water=1)
Molecular Formula: B₄Na₂O₇.10H₂O
Molecular Weight: 381.36

Section 10 - Stability and Reactivity

Chemical Stability:
Stable under normal temperatures and pressures.

Conditions to Avoid:
Dust generation.

Incompatibilities with Other Materials:
Alkaloid salts, metallic salts, strong acids.

Hazardous Decomposition Products:
Oxides of boron.

Hazardous Polymerization:
Has not been reported.

Section 11 - Toxicological Information

RTECS:
CAS# 1303-96-4: VZ2275000

LD₅₀/LC₅₀:
CAS# 1303-96-4:
Oral, mouse: LD₅₀ = 2 gm/kg;
Oral, rat: LD₅₀ = 2660 mg/kg

Carcinogenicity:
CAS# 1303-96-4: Not listed by ACGIH, IARC, NTP, or California Proposition 65.

Epidemiology:
No information found.

Teratogenicity:
Developmental effects were observed in mice, rats and rabbits after oral administration of boric acid. However, these effects were considered secondary to maternal toxicity (increased liver and kidney weight).

Reproductive:
Adverse reproductive effects have occurred in experimental animals. Boric acid has selectively damaged the testes, sperm production and fertility in rats and dogs.

Mutagenicity:
No information found.

Neurotoxicity:
No information found.

Section 12 - Ecological Information

No information found.
Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: Not regulated
Hazard Class:
UN Number:
Packing Group:

Section 15 - Regulatory Information

US Federal
TSCA:
   CAS# 1303-96-4 is listed on the TSCA Inventory.
SARA Reportable Quantities (RQ):
   None of the chemicals in this material have an RQ.
CERCLA/SARA Section 313:
   No chemicals are reportable under Section 313.
OSHA - Highly Hazardous:
   None of the chemicals in this product are considered highly hazardous by OSHA.

US State
State Right to Know:
   CAS# 1303-96-4 is not present on state lists from California, Pennsylvania, Minnesota, Massachusetts, or New Jersey.
California Regulations:
   None.

European/International Regulations
Canadian DSL/NDSL:
   CAS# 1303-96-4 is listed on Canada’s DSL List.
Canada Ingredient Disclosure List:
   CAS# 1303-96-4 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: November 14, 2007
Revision Date: October 12, 2009

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