Material Safety Data Sheet
Sodium Azide, 0.5% w/v

Section 1 - Chemical Product and Company Identification

MSDS Name:
Sodium Azide, 0.5% w/v
Catalog Numbers:
LC22940
Synonyms:

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 or 011-703-527-3887

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name:</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>26628-22-8</td>
<td>Sodium azide</td>
<td>0.5</td>
</tr>
<tr>
<td>7732-18-5</td>
<td>Water</td>
<td>&gt;99</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

Emergency Overview

Appearance: Clear, colorless liquid

Caution! May be fatal if inhaled, absorbed through the skin or swallowed. Contact with acids liberates very toxic and explosive gas, hydrazoic acid vapor. Reacts with many heavy metals to form explosive compounds. Aqueous solutions contain hydrazoic acid which volatilizes readily at 99°F. Hydrazoic acid is a colorless, volatile, highly toxic and highly explosive liquid with a characteristic odor, which has been described as sickening. Heating may cause an explosion. Causes eye, skin, and respiratory tract irritation. May cause cardiac disturbances. Heat sensitive. Dangerous for the environment.

Target Organs: Central nervous system, lungs, cardiovascular system, eyes, skin

Potential Health Effects

Eye:
Causes eye irritation. Contact with liquid or vapor may cause systemic toxic effects.

Skin:
Causes skin irritation. May be fatal if absorbed through the skin. If absorbed, causes symptoms similar to those of ingestion.
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Ingestion:
May be fatal if swallowed. Causes gastrointestinal irritation with nausea, vomiting and diarrhea. Sodium azide may cause hypotension (abnormally low blood pressure), tachycardia (rapid heart rate), tachypnea (quick, shallow breathing), hypothermia (low body temperature), convulsions and severe headache.

Inhalation:
May be fatal if inhaled. May cause effects similar to those described for ingestion. Rapidly absorbed. The vapor of hydrazoic acid may be present where sodium azide is handled. Symptoms of acute exposure to hydrazoic acid include eye irritation, headache, dramatic decrease in blood pressure, weakness, pulmonary edema, and collapse.

Chronic:
Chronic inhalation and ingestion may cause effects similar to those of acute inhalation and ingestion.

Section 4 - First Aid Measures

Eyes:
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

Skin:
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid.

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 at once.

Inhalation:
If inhaled, remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid immediately.

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. Vapors may form an explosive mixture with air. Containers may explode when heated. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Forms explosion sensitive compounds with some metals such as lead and copper. Hydrazoic acid vaporizes at 99°F. Hydrazoic acid vapor is highly toxic and a dangerous explosive. Hydrazoic acid is shock sensitive.

Extinguishing Media:
Use dry chemical, carbon dioxide, or alcohol-resistant foam.

Autoignition Temperature:
Not available

Flash Point:
Not applicable
NFPA Rating:
CAS# 26628-22-8: Health- 4, Flammability- 1, Instability- 3
CAS# 7732-18-5: Health- 0, 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:
Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Provide ventilation. Do not flush down the drain. Over a period of time, sodium azide may react with copper, lead, brass, or solder in plumbing systems to form an accumulation of the highly explosive compounds of lead azide and copper azide.

Section 7 - Handling and Storage

Handling:
Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale. Use only with adequate ventilation. Do not use with metal spatula or other metal items.

Storage:
Keep away from sources of ignition. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from acids. Do not store in metal containers. Keep containers tightly closed. Some have recommended storage in an explosion-proof refrigerator.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:
Facilities using or storing this material should be equipped with an eyewash and safety shower. Provide local exhaust or general dilution ventilation to keep airborne levels below the permissible exposure limits.

Exposure Limits:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium azide</td>
<td>0.29 mg/m³ Ceiling (as NaN₃); 0.11 ppm Ceiling (vapor, as hydrazoic acid)</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>Water</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs:
None.

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 protective 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>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless to slight</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</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>Same as water</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>212°F (100°C)</td>
</tr>
<tr>
<td>Freezing/Melting Point</td>
<td>32°F (0°C)</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>527°F (275°C)</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Soluble</td>
</tr>
<tr>
<td>Specific Gravity/Density</td>
<td>1.0</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Section 10 - Stability and Reactivity

Chemical Stability:
Stable. However, may decompose if heated. May be shock-sensitive.

Conditions to Avoid:
Incompatible substances, mechanical shock, light, temperatures above 275°C.

Incompatibilities with Other Materials:
Acids, some metals, oxidizing agents.

Hazardous Decomposition Products:
Nitrogen oxides, sodium oxide, hydrazoic acid.

Hazardous Polymerization:
Has not been reported.

Section 11 - Toxicological Information

RTECS:
CAS# 26628-22-8: VY8050000
CAS# 7732-18-5: ZC0110000

LD50/LC50:
CAS# 26628-22-8:
Inhalation, rat: LC50 = 37 mg/m³;
Oral, rat: LD50 = 27 mg/kg;
Skin, rabbit: LD50 = 20 mg/kg;
Skin, rat: LD50 = 50 mg/kg
CAS# 7732-18-5:
Oral, rat: LD50 = >90 mL/kg

**Carcinogenicity:**
CAS# 26628-22-8: Not listed by ACGIH, IARC, NTP, or California Prop 65.
CAS# 7732-18-5: Not listed by ACGIH, IARC, NTP, or California Prop 65.

**Epidemiology:**
No information available

**Teratogenicity:**
No information available

**Reproductive:**
No information available

**Mutagenicity:**
See actual entry in RTECS for sodium azide for complete information.

**Neurotoxicity:**
See actual entry in RTECS for sodium azide for complete information.

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**Section 12 - Ecological Information**

**Ecotoxicity:**
Fish: Rainbow trout: LC50 = 0.8-1.6 mg/L; 96 Hr.; 13 degrees C Fish: Bluegill/Sunfish: LC50 = 0.7-0.8 mg/L; 96 Hr.; 18 degrees C No data available.

**Environmental:**
Aquatic Fate: Photolysis of sodium azide may result in metal nitrides initially, with the eventual formation of the free metal and nitrogen gas.

**Physical:**
No information available.

**Other:**
Harmful to aquatic life in very low concentrations.

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**Section 13 - Disposal Considerations**

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

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**Section 14 - Transport Information**

**US DOT**
*Shipping Name:* Not regulated.

*Hazard Class:*

*UN Number:*

*Packing Group:*
Section 15 - Regulatory Information

US Federal
TSCA:
   CAS# 26628-22-8 is listed on the TSCA inventory.
   CAS# 7732-18-5 is listed on the TSCA inventory.
SARA Reportable Quantities (RQ):
   CAS# 26628-22-8: 1000 lb. final RQ; 454 kg final RQ
CERCLA/SARA Section 313:
   CAS# 26628-22-8: 500 lb. TPQ (This material contains a reactive solid. The TPQ does not default
to 10000 pounds for non-powder, non-molten, non-solvent form)
OSHA - Highly Hazardous:
   None of the chemicals in this product are considered highly hazardous by OSHA.

US State
State Right to Know:
   CAS# 26628-22-8 can be found on the following state right to know lists: California, New Jersey,
   Pennsylvania, Minnesota, Massachusetts.
   CAS# 7732-18-5 is not present on state lists from California, Pennsylvania, Minnesota,
   Massachusetts, Florida, or New Jersey.
California Regulations:
   None of the chemicals in this product are listed.

European/International Regulations
Canadian DSL/NDSL:
   CAS# 26628-22-8 is listed on Canada's DSL List.
   CAS# 7732-18-5 is listed on Canada's DSL List.
Canada Ingredient Disclosure List:
   CAS# 26628-22-8 is listed on the Canadian Ingredient Disclosure List.
   CAS# 7732-18-5 is not listed on the Canadian Ingredient Disclosure List

Section 16 - Other Information

MSDS Creation Date: June 7, 2007
Revision Date: September 20, 2010

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