Material Safety Data Sheet  
Lithium AA Standard, 1000 ppm

Section 1 - Chemical Product and Company Identification

MSDS Name:  
Lithium AA Standard, 1000 ppm
Catalog Numbers:  
LC16180
Synonyms:  
None
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>7732-18-5</td>
<td>Water</td>
<td>balance</td>
</tr>
<tr>
<td>7697-37-2</td>
<td>Nitric acid</td>
<td>4</td>
</tr>
<tr>
<td>554-13-2</td>
<td>Lithium carbonate</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

Emergency Overview

Appearance: Clear, colorless solution
Warning! May cause eye, skin, and respiratory tract irritation. May cause reproductive effects. Corrosive to metal.
Target Organs: Eyes, skin, respiratory tract, teeth

Potential Health Effects

Eye:
May cause eye irritation or burns.

Skin:
May cause skin irritation or burns.

Ingestion:
May cause irritation of the digestive tract.

Inhalation:
May cause respiratory tract irritation or burns.
Chronic:
Chronic exposure may result in dental erosion, bleeding of nose and gums, chronic bronchitis, and gastritis. May cause central nervous system effects. May cause reproductive effects in humans. May affect kidneys.

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 at once. Do NOT allow victim to rub or keep eyes closed.

Skin:
Get medical aid at once. 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 at once.

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. Reacts with most metals to form highly flammable hydrogen gas, which can form explosive mixtures with air. Avoid breathing corrosive vapors.

Extinguishing Media:
For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

Autoignition Temperature:
Not applicable.

Flash Point:
Not applicable.

NFPA Rating:
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:
Absorb spills with inert material (vermiculite, sand, fuller's earth) and place in suitable containers for later disposal. Large spills may be neutralized with dilute alkaline solutions of soda ash, or lime. Clean up spills immediately, observing precautions in the Protective Equipment section.

Section 7 - Handling and Storage

Handling:
Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in a well ventilated area. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale.

Storage:
Store in a cool, dry, well-ventilated area away from incompatible substances. Do not store in metal containers.

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 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>Water</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>Nitric acid</td>
<td>2 ppm TWA,</td>
<td>2 ppm TWA,</td>
<td>2 ppm TWA,</td>
</tr>
<tr>
<td></td>
<td>4 ppm STEL</td>
<td>25 ppm IDLH</td>
<td>5 mg/m3 TWA</td>
</tr>
<tr>
<td>Lithium carbonate</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs:
Nitric acid: 2 ppm TWA, 5 mg/m3 TWA

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 clothing 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>Physical State:</th>
<th>Clear liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>Colorless</td>
</tr>
</tbody>
</table>
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- Odor: Odorless  
- pH: Acidic (<1)  
- Vapor Pressure: Not available  
- Vapor Density: Not available  
- Evaporation Rate: Not available  
- Viscosity: Not available  
- Boiling Point: 105°C  
- Freezing/Melting Point: Not available  
- Decomposition Temperature: Not available  
- Solubility in water: Soluble.  
- Specific Gravity/Density: 1.03  
- Molecular Formula: Not applicable.  
- Molecular Weight: Not applicable.

Section 10 - Stability and Reactivity

**Chemical Stability:**  
Stable under normal temperatures and pressures.  

**Conditions to Avoid:**  
High temperatures, incompatible materials, excess heat.  

**Incompatibilities with Other Materials:**  
Metals, strong bases.  

**Hazardous Decomposition Products:**  
Nitrogen oxides.  

**Hazardous Polymerization:**  
Has not been reported.

Section 11 - Toxicological Information

**RTECS:**  
CAS# 7732-18-5: ZC0110000.  
CAS# 7697-37-2: QU5775000, QU5900000.  

**LD50/LC50:**  
CAS# 7732-18-5:  
Oral, rat: LD50 = >90 mL/kg.  
CAS# 7697-37-2:  
Inhalation, rat: LC50 = 67 ppm(NO2)/4H.  
CAS# 554-13-2:  
Oral, mouse: LD50 = 531 mg/kg  
Oral, rat: LD50 = 525 mg/kg.  

**Carcinogenicity:**  
CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.  
CAS# 7697-37-2: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.  
CAS# 554-13-2: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.
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Epidemiology:
No information found

Teratogenicity:
See actual entry in RTECS for complete information.

Reproductive:
No information found

Mutagenicity:
See actual entry in RTECS for complete information.

Neurotoxicity:
No information found

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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: Nitric acid solution
Hazard Class: 8
UN Number: UN2031
Packing Group: PGII

Section 15 - Regulatory Information

US Federal
TSCA:
CAS# 7732-18-5 is listed on the TSCA Inventory.
CAS# 7697-37-2 is listed on the TSCA Inventory.
CAS# 554-13-2 is listed on the TSCA Inventory.

SARA Reportable Quantities (RQ):
CAS# 7697-37-2: final RQ = 1000 pounds (454 kg)

CERCLA/SARA Section 313:
This material contains Nitric acid (CAS# 7697-37-2, 4%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.
Lithium carbonate is not at a high enough concentration to be reportable under Section 313.

OSHA - Highly Hazardous:
CAS# 7697-37-2 is considered highly hazardous by OSHA.
US State

State Right to Know:
Nitric acid can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.
Lithium carbonate can be found on the following state Right-to-Know lists: New Jersey, Massachusetts.

California Regulations:
WARNING: This product contains Lithium carbonate, a chemical known to the state of California to cause birth defects or other reproductive harm.

European/International Regulations

Canadian DSL/NDSL:
CAS# 7732-18-5 is listed on Canada's DSL List.
CAS# 7697-37-2 is listed on Canada's DSL List.
CAS# 554-13-2 is listed on Canada's DSL List.

Canada Ingredient Disclosure List:
CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.
CAS# 7697-37-2 is listed on Canada's Ingredient Disclosure List.
CAS# 554-13-2 is not listed on Canada's Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: July 14, 1998
Revision Date: October 20, 2008

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