Section 1 - Chemical Product and Company Identification

MSDS Name: o-Tolidine Solution, 0.1%
Catalog Numbers: LC26160
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>7647-01-0</td>
<td>Hydrochloric acid</td>
<td>7.4</td>
</tr>
<tr>
<td>612-82-8</td>
<td>o-Tolidine dihydrochloride</td>
<td>0.1</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

Emergency Overview
Appearance: Clear, colorless solution
Target Organs: Blood, eyes, skin, respiratory system, teeth

Potential Health Effects
Eye:
Vapors are irritating to the eye. Liquid contact may result in clouding of the cornea, erosion, up to total corneal opacification and loss of the eye.

Skin:
May cause severe burns and ulceration. Skin may turn brown-yellow. Deep burns are slow to heal and scarring may occur. May be harmful if absorbed through the skin.

Ingestion:
Causes severe digestive tract burns with abdominal pain, vomiting, and possible death. May cause corrosion and permanent tissue destruction of the esophagus and digestive tract.
Inhalation:
May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema. Palpitation, inflammation, edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema may result from inhalation exposure.

Chronic:
May cause cancer in humans. Chronic exposure may cause blood effects. Possible risk of irreversible effects. Chronic exposure may result in dental erosion, jaw necrosis, respiratory disease, dermatitis, conjunctivitis, corneal scarring and fever.

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:
Do NOT induce vomiting. Give conscious victim 2-4 cupfuls of milk or water. 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 breathing is difficult, give oxygen. Get medical aid. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

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.

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- 3, Flammability- 0, Instability- 1.

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 absorbent (vermiculite, sand, fuller's earth) and place in suitable containers labeled for later disposal. Large spills may be carefully 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. Wash hands before eating. Use only in a well ventilated area. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Do not allow contact with water. Use caution when opening.

Storage:
Store in a cool, dry area. Store in a tightly closed container.

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>Hydrochloric acid</td>
<td>2 ppm Ceiling</td>
<td>50 ppm IDLH</td>
<td>5 ppm Ceiling; 7 mg/m3 Ceiling</td>
</tr>
<tr>
<td>o-Tolidine hydrochloride</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 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

Physical State: Liquid
Color: Colorless
Odor: Odorless
pH: Acidic
Vapor Pressure: 14 mm Hg @ 20°C
Vapor Density: 0.7 (Air=1)
Evaporation Rate: Not available
Viscosity: Not available
Boiling Point: 212°F (100°C)
Freezing/Melting Point: 32°F (0°C)
Decomposition Temperature: Not available
Solubility in water: Soluble
Specific Gravity/Density: 1.0-1.2
Molecular Formula: Not applicable
Molecular Weight: Not applicable

Section 10 - Stability and Reactivity

Chemical Stability:
Air and light sensitive.

Conditions to Avoid:
Incompatible materials, light, exposure to air, excess heat.

Incompatibilities with Other Materials:
Strong oxidizing agents, bases, amines, anhydrides, perchlorates, permanganates, sulfuric acid, vinyl acetate, metals and metal compounds (toxic, e.g. beryllium, lead acetate, nickel carbonyl, tetraethyl lead), perchloric acid, carbides, alcoholic hydrogen cyanide, tetraselenium tetranitride, acetylides. Liquid will attach some forms of plastics, rubber, and coatings.

Hazardous Decomposition Products:
Hydrogen chloride, carbon monoxide, oxides of nitrogen, carbon dioxide, ammonia.

Hazardous Polymerization:
Has not been reported.

Section 11 - Toxicological Information

RTECS:
CAS# 7732-18-5: ZC0110000.
CAS# 7647-01-0: MW4025000.
CAS# 612-82-8: DD1226000.

LD50/LC50:
CAS# 7732-18-5:
  Oral, rat: LD50 >90 mL/kg
CAS# 7647-01-0:
  Inhalation, rat: LC50 = 3124 ppm/1H;
  Oral, rabbit: LD50 = 900 mg/kg
CAS# 612-82-8:
  Not available.
Carcinogenicity:
CAS# 612-82-8: Listed by the state of California as a carcinogen.

Epidemiology:
Tumorigenic effects have been reported in experimental animals.

Teratogenicity:
No information found

Reproductive:
No information found

Mutagenicity:
Mutagenic effects have been reported in experimental animals.

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: Hydrochloric acid solution
Hazard Class: 8
UN Number: UN1789
Packing Group: PGII

Section 15 - Regulatory Information

US Federal
TSCA:
CAS# 7732-18-5 is listed on the TSCA Inventory.
CAS# 7647-01-0 is listed on the TSCA Inventory.
CAS# 612-82-8 is listed on the TSCA Inventory.

SARA Reportable Quantities (RQ):
CAS# 7647-01-0: final RQ = 5000 pounds (2270 kg)

CERCLA/SARA Section 313:
This material contains Hydrochloric acid (CAS# 7647-01-0, 7.4%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.
This material contains o-Tolidine hydrochloride (CAS# 612-82-8, 0.1%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

OSHA - Highly Hazardous:
CAS# 7647-01-0 is considered highly hazardous by OSHA.
US State
State Right to Know:
Hydrochloric acid can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

California Regulations:
WARNING: This product contains o-Tolidine dihydrochloride, a chemical known to the state of California to cause cancer.

European/International Regulations
Canadian DSL/NDSL:
CAS# 7732-18-5 is listed on Canada's DSL List.
CAS# 7647-01-0 is listed on Canada's DSL List.
CAS# 612-82-8 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# 7647-01-0 is listed on Canada's Ingredient Disclosure List.
CAS# 612-82-8 is not listed on Canada's Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: November 5, 2000
Revision Date: September 9, 2009

Information in this MSDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made and LabChem Inc. assumes no liability resulting from the use of this MSDS. The user must determine suitability of this information for his application.