Material Safety Data Sheet
Lactic Acid Solutions

Section 1 - Chemical Product and Company Identification

MSDS Name:
Lactic Acid Solutions

Catalog Numbers:
LC15950, LC16000, LC16020

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 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>7732-18-5</td>
<td>Water</td>
<td>balance</td>
</tr>
<tr>
<td>50-21-5</td>
<td>Lactic acid</td>
<td>9 - 85</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

Emergency Overview

Appearance: *Clear colorless to slightly yellow solution*

Warning! May cause eye, skin, and respiratory tract irritation. Corrosive to metal.

Target Organs: *Blood, kidneys, eyes, skin, respiratory system*

Potential Health Effects

Eye:
May cause eye irritation or burns. Risk of serious damage to eyes.

Skin:
May cause skin irritation or burns.

Ingestion:
May cause severe irritation to gastrointestinal tract.

Inhalation:
May cause irritation to the respiratory tract.
Chronic:
Adverse reproductive effects have been reported in animals. Laboratory experiments have resulted in mutagenic effects. Chronic exposure may cause blood effects and kidney damage.

**Section 4 - First Aid Measures**

**Eyes:**
Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids until no evidence of chemical remains. Get medical aid at once.

**Skin:**
Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid at once.

**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:**
Move victim to fresh air immediately. If breathing is difficult, administer oxygen. Give artificial respiration if necessary. Get medical aid at once.

**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 available

**Flash Point:**
113°C (235°F)

**NFPA Rating:**
CAS# 7732-18-5: Health- 0, Flammability- 0, Instability- 0.
CAS# 50-21-5: Health- 2, Flammability- 1, 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 spill with inert material such as sand, vermiculite, or diatomaceous earth, and transfer to a suitable container labeled for later disposal.
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Section 7 - Handling and Storage

Handling:
Wash thoroughly after handling. Do not ingest or inhale. Do not get in eyes, on skin, or on clothing. Use with adequate ventilation.

Storage:
Store tightly capped in a cool, dry, well-ventilated area away from incompatible materials.

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>Water</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>Lactic acid</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. Do not wear contact lenses when working with chemicals.

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. Always use a NIOSH-approved respirator when necessary.

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>Clear, colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless to slightly acrid</td>
</tr>
<tr>
<td>pH</td>
<td>2.8 (1% w/v soln.)</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 available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>100 - 122°C (212 - 252°F)</td>
</tr>
<tr>
<td>Freezing/Melting Point</td>
<td>0 - 17°C (32 - 63°F)</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Soluble</td>
</tr>
</tbody>
</table>
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Specific Gravity/Density: 1.0 – 1.25
Molecular Formula: Not applicable
Molecular Weight: Not applicable

Section 10 - Stability and Reactivity

Chemical Stability:
Stable under normal temperatures and pressures.

Conditions to Avoid:
Incompatible materials, excess heat.

Incompatibilities with Other Materials:
Metals, strong oxidizing agents, strong reducing agents, strong bases, nitric acid, iodides.

Hazardous Decomposition Products:
Carbon monoxide, carbon dioxide.

Hazardous Polymerization:
Has not been reported.

Section 11 - Toxicological Information

RTECS:
CAS# 7732-18-5: ZC0110000.
CAS# 50-21-5: OD2800000.

LD50/LC50:
CAS# 7732-18-5:
Oral, rat: LD50 = >90 mL/kg
CAS# 50-21-5:
Oral, mouse: LD50 = 4875 mg/kg
Oral, rat: LD50 = 3543 mg/kg
Skin, rabbit: LD50 = >2 gm/kg

Carcinogenicity:
CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.
CAS# 50-21-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

Epidemiology:
No information found

Teratogenicity:
No information found

Reproductive:
Adverse reproductive effects have occurred in experimental animals.

Mutagenicity:
Mutagenic effects have occurred 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

<table>
<thead>
<tr>
<th>US DOT</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;10%</td>
<td>10-85%</td>
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<tr>
<td>Shipping Name:</td>
<td>Not regulated.</td>
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<tr>
<td>Hazard Class:</td>
<td>8</td>
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<tr>
<td>UN Number:</td>
<td>UN3265</td>
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<tr>
<td>Packing Group:</td>
<td>PGIII</td>
</tr>
</tbody>
</table>

Section 15 - Regulatory Information

US Federal
TSCA:
CAS# 7732-18-5 is listed on the TSCA Inventory.
CAS# 50-21-5 is listed on the TSCA Inventory.
SARA Reportable Quantities (RQ):
None of the components are on this list.
CERCLA/SARA Section 313:
None of the components are on this list.
OSHA - Highly Hazardous:
None of the chemicals in this product are considered highly hazardous by OSHA.

US State
State Right to Know:
None of the components are on this list.
California Regulations:
None.

European/International Regulations
Canadian DSL/NDSL:
CAS# 7732-18-5 is listed on Canada's DSL List.
CAS# 50-21-5 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# 50-21-5 is listed on Canada's Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: May 6, 1998
Revision Date: August 29, 2011
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