Section 1 - Chemical Product and Company Identification

MSDS Name:
Reagent alcohol, 50% - 70%
Catalog Numbers:
LC22110, LC22220
Synonyms:

Company Identification:
LabChem, Inc.
200 William Pit Way
Pittsburgh, PA 15238
Company Phone Number:
(412) 826-5320
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>64-17-5</td>
<td>Ethyl alcohol</td>
<td>50 - 70</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: yellow
Flammable liquid and vapor. Warning: May cause eye and skin irritation. May cause respiratory and digestive tract irritation. Flash Point: > 57°F.
Target Organs: none known.

Potential Health Effects
Eye:
May cause eye irritation.
Skin:
May cause irritation and dermatitis.
Ingestion:
Ingestion can result in toxic inanition, poisoning.

Inhalation:
May cause central nervous system effect including vertigo, anxiety, depression, muscle incoordination, and emotional instability. Respiratory irritation, dizziness, weakness, fatigue, nausea, headache, unconsciousness, asphyxiation (effects of narcotic).

Chronic:
Repeated or excessive exposure may result in respiratory irritation, cough, headache, dermatitis, conjunctivitis, with possible liver and kidney damage, weight loss, neurological disorders (nervousness, myocardiad and circulatory failure).

Section 4 - First Aid Measures

Eyes:
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:
Get medical aid. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Remove contaminated clothing and shoes.

Ingestion:
Give conscious victim 2-4 cups of milk or water. Get medical aid at once. Give oxygen if respiration is depressed. Induce vomiting (touch finger to back of throat) keeping head lower than hips (prevent aspiration into lungs).

Inhalation:
Give artificial respiration if necessary. Get medical aid. Keep victim warm, at rest. Move victim to fresh air.

Notes to Physician:
Treat symptomatically and supportive.

Section 5 - Fire Fighting Measures

General Information:
Vapors heavier than air, may travel considerable distance and flash back from source of ignition. Move container if possible, avoid breathing vapors or dust. Dangerous fire/exploitation hazard when exposed to heat or flame.

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

Autoignition Temperature:
No information found.

Flash Point:
> 57°F (> 38.8°C)

NFPA Rating:
CAS # 7732-18-5: Not published.
CAS # 64-17-5 health: 0, flammability: 3, reactivity: 0

Explosion Limits:
Lower: No information
Upper: No information

Section 6 - Accidental Release Measures

General Information:
Use proper personal protective equipment as indicated in Section 8.
Material Safety Data Sheet
Reagent alcohol, 50% - 70%

Spills/Leaks:
Absorb spills with absorbent (vermiculite, sand, fuller's earth) and place in plastic bags for later disposal. Keep out of sewers/drainage.

Section 7 - Handling and Storage

Handling:
Wash thoroughly after handling. Avoid breathing dust, vapor, mist, or gas.
Storage:
Store capped at room temperature. Protect from heat and incompatibles.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:
Provide local exhaust or general dilution ventilation.

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 of the components are on this list.</td>
<td>None of the components are on this list.</td>
<td>None of the components are on this list.</td>
</tr>
<tr>
<td>Ethyl alcohol</td>
<td>1000 ppm TWA</td>
<td>1000 ppm TWA</td>
<td>1000 ppm TWA</td>
</tr>
<tr>
<td></td>
<td>1900 mg/m³ TWA</td>
<td>1900 mg/m³ TWA</td>
<td>1900 mg/m³ TWA</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs
Ethyl alcohol: 1000 ppm TWA; 1900 mg/m³ TWA

Personal Protective Equipment

Eyes:
Do not wear contact lenses when working with chemicals. An eye wash station should be available in the immediate work area. Wear splash-proof safety goggles.

Skin:
Wear appropriate protective gloves to prevent skin exposure.

Clothing:
Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Color: yellow
Odor: alcohol-like
pH: No information found.
Vapor Pressure: No information found.
Vapor Density: No information found.

Section 10 - Stability and Reactivity

Chemical Stability:
Stable under normal temperatures and pressures.

Conditions to Avoid:
Incompatible materials, excess heat.

Incompatibilities with Other Materials
Strong oxidizing agents, alkali metals.

Hazardous Decomposition Products
Oxides of carbon, formaldehyde.
Hazardous Polymerization
Has not been reported

Section 11 - Toxicological Information

RTCS:
CAS# 7732-18-5: ZC0110000.
CAS# 64-17-5: KG0300006.
LD50/LC50:
CAS# 7732-18-5:
Oral, rat: LD50 = 90 mL/kg.
CAS# 64-17-5:
Inhalation, mouse: LC50 = 39 g/m³/4H
Inhalation, rat: LC50 = 29000 ppm/10H
Oral, mouse: LD50 = 3450 mg/kg
Oral, rabbit: LD50 = 6300 mg/kg
Oral, rat: LD50 = 7060 mg/kg.

Carcinogenicity:
CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.
CAS# 64-17-5
ACGIH: A4 - Not Classifiable as a Human Carcinogen
California: Not listed.
NIOSH: Not listed.
NTP: Not listed.
OSHA: Not listed.
IARC: Not listed.
Material Safety Data Sheet
Reagent alcohol, 50% - 70%

Epidemiology:
Toxicity: dichlorotetraoxane has been deleted by FDA for use in drugs or cosmetics (D&C Orange No. 8) because of its toxicity. Reagent alcohol (90% ethanol, 5% methanol, 5% isopropyl) is considered an irritant/tarrector; mutagenic.
HBV data:
Isopropyl alcohol manufactured by the strong acid process is listed in group 1 by IARC. Workers manufacturing isopropyl alcohol by this process showed increased tumors in lung and nasal cancer.

Teratogenicity:
Reproductive:
Mutagenicity:
Neurotoxicity:

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: Ethanol solution
Hazard Class: 3
UN Number: UN1170
Packing Group: PG III

Section 15 - Regulatory Information
US Federal
TSCA
CASI 7732-16-5 is listed on the TSCA Inventory.
CASI 64-17-5 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 components are on this list.

US State

Material Safety Data Sheet
Reagent alcohol, 50% - 70%

State Right to Know
Ethyl alcohol can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

California Regulations
WARNING: This product contains Ethyl alcohol, 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# 64-17-5 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# 64-17-5 is listed on Canada’s Ingredient Disclosure List.

Section 16 - Other Information
MSDS Creation Date: January 31, 1999
Revision Date: July 27, 2004

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