Material Safety Data Sheet
Ehrlich’s Reagent

Section 1 - Chemical Product and Company Identification

MSDS Name:
Ehrlich’s Reagent
Catalog Numbers:
LC14080
Synonyms:
p-Dimethylaminobenzaldehyde in n-Propanol
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>100-10-7</td>
<td>p-Dimethylaminobenzaldehyde</td>
<td>5</td>
</tr>
<tr>
<td>71-23-8</td>
<td>n-Propanol</td>
<td>95</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

Emergency Overview

Appearance: Clear, yellow solution
Warning! Flammable liquid and vapor. May cause eye, skin, and respiratory tract irritation. May be harmful if swallowed. May cause central nervous system depression. May cause dermatitis. Harmful to aquatic organisms; may cause long-term adverse effects in the aquatic environment.
Target Organs: Central nervous system, liver.

Potential Health Effects

Eye:
May cause moderate eye irritation. May result in corneal injury.

Skin:
May cause moderate skin irritation. Prolonged and/or repeated contact may cause defatting of the skin and dermatitis.

Ingestion:
May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and
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nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure.

**Inhalation:**
Inhalation of vapor may cause respiratory tract irritation. May cause effects similar to those described for ingestion.

**Chronic:**
Prolonged or repeated skin contact may cause defatting and dermatitis. Chronic exposure may cause liver damage.

**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.

**Skin:**
Get medical aid. 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. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

**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. Combustion generates toxic fumes. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Flammable liquid. Can release vapors that form explosive mixtures at temperatures above the flashpoint. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

**Extinguishing Media:**
Use water spray to cool fire-exposed containers. Use dry chemical, carbon dioxide, or alcohol-resistant foam. Do NOT use straight streams of water.

**Autoignition Temperature:**
405 °C (761 °F)

**Flash Point:**
15 °C (59 °F)

**NFPA Rating:**
(estimated) Health: 1, Flammability: 3, Instability: 1

**Explosion Limits:**
Lower: 2.2 % Upper: 13.7 %
Section 6 - Accidental Release Measures

**General Information:**
Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:**
Absorb spill with inert material (e.g. vermiculite, sand or earth), and then place in suitable container. Avoid runoff into storm sewers and ditches that lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Provide ventilation.

Section 7 - Handling and Storage

**Handling:**
Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Use spark-proof tools and explosion proof equipment. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Do not get on skin or in eyes. Do not ingest or inhale. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

**Storage:**
Keep away from heat, sparks, and flame. Do not store near combustible materials. Store in a cool, dry place. Store in a tightly closed container. Keep from contact with oxidizing 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 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>p-Dimethylamino-benzaldehyde</td>
<td>None listed</td>
<td>None listed</td>
<td>None listed</td>
</tr>
<tr>
<td>n-Propanol</td>
<td>100 ppm TWA</td>
<td>200 ppm TWA</td>
<td>200 ppm TWA</td>
</tr>
<tr>
<td></td>
<td>500 mg/m3 TWA</td>
<td>500 mg/m3 TWA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>800 ppm IDLH</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**OSHA Vacated PELs:**
n-Propyl alcohol: 200 ppm TWA; 500 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 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: Yellow
Odor: Alcoholic
pH: Not available
Vapor Pressure: 14.3 mm Hg @ 20°C
Vapor Density: 2.1 (air = 1)
Evaporation Rate: 1.3 (butyl acetate = 1)
Viscosity: 2.2 mPas @ 20°C
Boiling Point: 97 °C
Freezing/Melting Point: -127°C
Decomposition Temperature: Not available
Solubility in water: Miscible
Specific Gravity/Density: 0.80 g/cm3
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, ignition sources, light.

Incompatibilities with Other Materials:
Acid chlorides, acid anhydrides, oxidizing agents, potassium tert-butoxide, strong bases.

Hazardous Decomposition Products:
Carbon monoxide, carbon dioxide, nitrogen oxides.

Hazardous Polymerization:
Has not been reported.

Section 11 - Toxicological Information

RTECS:
CAS# 100-10-7: CU5775000
CAS# 71-23-8: UH8225000

LD50/LC50:
CAS# 100-10-7:
Oral, mouse: LD50 = 800 mg/kg
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CAS# 71-23-8:
  Draize test, rabbit, eye: 20 mg/24H Moderate
  Inhalation, mouse: LC50 = 48000 mg/m3
  Oral, mouse: LD50 = 6800 mg/kg
  Oral, rabbit: LD50 = 2825 mg/kg
  Oral, rat: LD50 = 1870 mg/kg
  Oral, rat: LD50 = 2200 mg/kg
  Skin, rabbit: LD50 = 5040 mg/kg

Carcinogenicity:
  CAS# 100-10-7: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
  CAS# 71-23-8: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology:
  Oral rat TDLo = 50 gm/kg/81 weeks. 1-Propanol caused liver tumors and leukemia according to RTECS criteria.

Teratogenicity:
  No information found

Reproductive:
  An exposure of 7000 ppm/7 hours caused a reduction in fertility in male rats and caused fetotoxic effects. A dose of 10000 ppm/7 hours caused musculoskeletal abnormalities and post-implantation mortality.

Mutagenicity:
  No information found

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: Flammable liquid, nos
  Hazard Class: 3
  UN Number: UN1993
  Packing Group: PGII

Section 15 - Regulatory Information

US Federal
  TSCA:
    CAS# 100-10-7 is listed on the TSCA inventory.
    CAS# 71-23-8 is listed on the TSCA inventory.
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SARA Reportable Quantities (RQ):
None of the chemicals in this material have an RQ.

CERCLA/SARA Section 313:
Not reportable under Section 313.

OSHA - Highly Hazardous:
None of the chemicals in this product are considered highly hazardous by OSHA.

US State
State Right to Know:
CAS# 71-23-8 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Regulations:
None.

European/International Regulations
Canadian DSL/NDSL:
CAS# 100-10-7 is listed on Canada's DSL List.
CAS# 71-23-8 is listed on Canada's DSL List.

Canada Ingredient Disclosure List:
CAS# 100-10-7 is not listed on the Canadian Ingredient Disclosure List.
CAS# 71-23-8 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: June 19, 2008
Revision Date: May 5, 2010

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