Ehrlich’s Reagent
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Date of issue: 02/17/2014 Revision date: 05/24/2017 Supersedes: 11/25/2015 Version: 1.2

SECTION 1: Identification

1.1. Identification
Product form : Mixtures
Product name : Ehrlich's Reagent
Product code : LC14080

1.2. Recommended use and restrictions on use
Use of the substance/mixture : For laboratory and manufacturing use only.

1.3. Supplier
LabChem Inc
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court
Zelienople, PA 16063 - USA
T 412-826-5230 - F 724-473-0647
info@labchem.com - www.labchem.com

1.4. Emergency telephone number
Emergency number : CHEMTREC: 1-800-424-9300 or 011-703-527-3887

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture
GHS-US classification
Flammable liquids Category 2
H225 Highly flammable liquid and vapor
Serious eye damage/eye irritation Category 1
H318 Causes serious eye damage
Specific target organ toxicity (single exposure) Category 3
H336 May cause drowsiness or dizziness

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements
GHS-US labeling

Hazard pictograms (GHS-US) :

GHS02  GHS05  GHS07

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) :
H225 - Highly flammable liquid and vapor
H318 - Causes serious eye damage
H336 - May cause drowsiness or dizziness

Precautionary statements (GHS-US) :
P210 - Keep away from heat, sparks, open flames, hot surfaces. - No smoking
P233 - Keep container tightly closed
P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof electrical, ventilating, lighting equipment
P242 - Use only non-sparking tools
P243 - Take precautionary measures against static discharge
P261 - Avoid breathing mist, vapors, spray
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective gloves, protective clothing, eye protection
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a poison center or doctor/physician
P370+P378 - In case of fire: Use alcohol resistant foam, carbon dioxide (CO2) to extinguish
P403+P235 - Store in a well-ventilated place. Keep cool
P405 - Store locked up
P501 - Dispose of contents/container to comply with local, state and federal regulations
If inhaled: Remove person to fresh air and keep comfortable for breathing

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification: None under normal conditions.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Propanol</td>
<td>(CAS-No.) 71-23-8</td>
<td>95</td>
<td>Flam. Liq. 2, H225</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 3 (Inhalation:vapour), H331</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Dam. 1, H318</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STOT SE 3, H336</td>
</tr>
<tr>
<td>p-Dimethylaminobenzaldehyde, ACS</td>
<td>(CAS-No.) 100-10-7</td>
<td>5</td>
<td>Eye Irrit. 2A, H319</td>
</tr>
</tbody>
</table>

Full text of hazard classes and H-statements: see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

First-aid measures after skin contact: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing.

First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.

First-aid measures after ingestion: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation: May cause drowsiness or dizziness.

Symptoms/effects after eye contact: Causes serious eye damage.

4.3. Immediate medical attention and special treatment, if necessary

Obtain medical assistance.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media


Unsuitable extinguishing media: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard: Highly flammable liquid and vapor.

Explosion hazard: May form flammable/explosive vapor-air mixture.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.

6.1.1. For non-emergency personnel


Emergency procedures: Evacuate unnecessary personnel.
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6.1.2. For emergency responders
Protective equipment: Equip cleanup crew with proper protection. Avoid breathing mist, spray.
Emergency procedures: Ventilate area.

6.2. Environmental precautions
Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections
See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Additional hazards when processed: Handle empty containers with care because residual vapors are flammable.
Precautions for safe handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No naked lights. No smoking. Use only non-sparking tools. Avoid breathing mist, vapors, spray. Use only outdoors or in a well-ventilated area.
Hygiene measures: Wash exposed skin thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities
Technical measures: Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/… equipment.
Storage conditions: Keep only in the original container in a cool, well ventilated place away from: Heat sources, Ignition sources. Keep in fireproof place. Keep container tightly closed.
Incompatible materials: Sources of ignition. Direct sunlight. Heat sources.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>1-Propanol (71-23-8)</th>
<th>ACGIH</th>
<th>ACGIH TWA (ppm)</th>
<th>100 ppm (n-Propanol (n-Propyl alcohol); USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>p-Dimethylaminobenzaldehyde, ACS (100-10-7)</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8.2. Appropriate engineering controls
Appropriate engineering controls: Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

8.3. Individual protection measures/Personal protective equipment
Personal protective equipment:
Gloves. Safety glasses.

Hand protection:
Wear protective gloves

Eye protection:
Chemical goggles or safety glasses
Respiratory protection:
Respiratory protection not required in normal conditions

Other information:
Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic 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>Yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>None.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Highly flammable liquid and vapor.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
No additional information available

10.2. Chemical stability
Highly flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

10.3. Possibility of hazardous reactions
Reacts vigorously with strong oxidizers and acids.

10.4. Conditions to avoid
Direct sunlight. Extremely high or low temperatures. Open flame.

10.5. Incompatible materials

10.6. Hazardous decomposition products

SECTION 11: Toxicological information

11.1. Information on toxicological effects
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**Likely routes of exposure**: Inhalation; Skin and eye contact

**Acute toxicity**: Not classified

<table>
<thead>
<tr>
<th>1-Propanol (71-23-8)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 2000 mg/kg (Rat)</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>4049 mg/kg (Rabbit)</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>9.8 mg/l/4h (Rat)</td>
</tr>
<tr>
<td>ATE US (dermal)</td>
<td>4049 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (vapors)</td>
<td>9.8 mg/l/4h</td>
</tr>
<tr>
<td>ATE US (dust, mist)</td>
<td>9.8 mg/l/4h</td>
</tr>
</tbody>
</table>

**Skin corrosion/irritation**: Not classified

**Serious eye damage/irritation**: Causes serious eye damage.

**Respiratory or skin sensitization**: Not classified

**Germ cell mutagenicity**: Not classified

**Carcinogenicity**: Not classified

**Reproductive toxicity**: Not classified

**Specific target organ toxicity – single exposure**: May cause drowsiness or dizziness.

**Specific target organ toxicity – repeated exposure**: Not classified

**Aspiration hazard**: Not classified

**Potential Adverse human health effects and symptoms**: Based on available data, the classification criteria are not met.

**Symptoms/effects after inhalation**: May cause drowsiness or dizziness.

**Symptoms/effects after eye contact**: Causes serious eye damage.

### SECTION 12: Ecological information

#### 12.1. Toxicity

<table>
<thead>
<tr>
<th>1-Propanol (71-23-8)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 2</td>
<td>4480 mg/l (LC50; 96 h; Pimephales promelas)</td>
</tr>
<tr>
<td>EC50 Daphnia 2</td>
<td>3644 mg/l (EC50; 48 h)</td>
</tr>
</tbody>
</table>

#### 12.2. Persistence and degradability

**Ehrlich's Reagent**

<table>
<thead>
<tr>
<th>Persistence and degradability</th>
<th>Not established.</th>
</tr>
</thead>
</table>

**1-Propanol (71-23-8)**

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Biochemical oxygen demand (BOD)</td>
<td>0.47 - 1.63 g O₂/g substance</td>
</tr>
<tr>
<td>Chemical oxygen demand (COD)</td>
<td>2.23 g O₂/g substance</td>
</tr>
<tr>
<td>ThOD</td>
<td>2.4 g O₂/g substance</td>
</tr>
<tr>
<td>BOD (% of ThOD)</td>
<td>0.20 - 0.44</td>
</tr>
</tbody>
</table>

**p-Dimethylaminobenzaldehyde, ACS (100-10-7)**

<table>
<thead>
<tr>
<th>Persistence and degradability</th>
<th>Not established.</th>
</tr>
</thead>
</table>

#### 12.3. Bioaccumulative potential

**Ehrlich's Reagent**

<table>
<thead>
<tr>
<th>Bioaccumulative potential</th>
<th>Not established.</th>
</tr>
</thead>
</table>

**1-Propanol (71-23-8)**

<table>
<thead>
<tr>
<th>Log Pow</th>
<th>0.25 (Experimental value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioaccumulative potential</td>
<td>Low potential for bioaccumulation (Log Kow &lt; 4).</td>
</tr>
</tbody>
</table>

**p-Dimethylaminobenzaldehyde, ACS (100-10-7)**

<table>
<thead>
<tr>
<th>Bioaccumulative potential</th>
<th>Not established.</th>
</tr>
</thead>
</table>
12.4. Mobility in soil

| 1-Propanol (71-23-8) | Surface tension | 0.024 N/m (20 °C) |

12.5. Other adverse effects

Effect on the global warming : No known effects from this product.

GWPmix comment : No known effects from this product.

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with local, state and federal regulations.

Additional information : Handle empty containers with care because residual vapors are flammable.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN1993 Flammable liquids, n.o.s., 3, II

UN-No.(DOT) : UN1993

Proper Shipping Name (DOT) : Flammable liquids, n.o.s.

Transport hazard class(es) (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Packing group (DOT) : II - Medium Danger

Hazard labels (DOT) : 3 - Flammable liquid

DOT Packaging Non Bulk (49 CFR 173.xxx) : 202

DOT Packaging Bulk (49 CFR 173.xxx) : 242

DOT Symbols : G - Identifies PSN requiring a technical name

DOT Special Provisions (49 CFR 172.102) : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. T7 - 4 178.274(d)(2) Normal............. 178.275(d)(3)

DOT Packaging Exceptions (49 CFR 173.xxx) : 150

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L

DOT Vessel Stowage Location : B - (i) The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) “On deck only” on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

Other information : No supplementary information available.
SECTION 15: Regulatory information

15.1. US Federal regulations

**Ehrlich's Reagent**

SARA Section 311/312 Hazard Classes: Fire hazard

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

- **1-Propanol (71-23-8)**
  - SARA Section 311/312 Hazard Classes: Fire hazard

15.2. International regulations

**CANADA**

- **1-Propanol (71-23-8)**
  - Listed on the Canadian DSL (Domestic Substances List)

**EU-Regulations**

No additional information available

**National regulations**

- **1-Propanol (71-23-8)**
  - Listed on the Canadian IDL (Ingredient Disclosure List)

15.3. US State regulations

- California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

Revision date: 05/24/2017

Other information: None.

Full text of H-phrases: see section 16:

- **H225** - Highly flammable liquid and vapor
- **H318** - Causes serious eye damage
- **H319** - Causes serious eye irritation
- **H331** - Toxic if inhaled
- **H336** - May cause drowsiness or dizziness

NFPA health hazard: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard: 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.

NFPA reactivity: 0 - Material that in themselves are normally stable, even under fire conditions.
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Hazard Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 3 Serious Hazard - Materials capable of ignition under almost all normal temperature conditions. Includes flammable liquids with flash points below 73 F and boiling points above 100 F. as well as liquids with flash points between 73 F and 100 F. (Classes IB & IC)

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection : H

H - Splash goggles, Gloves, Synthetic apron, Vapor respirator

SDS US LabChem

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