SAVOGRAN COMPANY

LYNSOL (Denatured Alcohol)

IDENTIFICATION

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lynsol</td>
<td>1030</td>
</tr>
</tbody>
</table>

Chemical Name Not Applicable

Product Appearance and Odor

Light colorless liquid
Mild Odor

PRODUCT/INGREDIENT

<table>
<thead>
<tr>
<th>No.</th>
<th>Composition</th>
<th>CAS No.</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ethyl Alcohol</td>
<td>64-17-5</td>
<td>86-87</td>
</tr>
<tr>
<td>2</td>
<td>Methyl Alcohol</td>
<td>67-56-1</td>
<td>3-4</td>
</tr>
<tr>
<td>3</td>
<td>Ethyl Acetate</td>
<td>141-78-6</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>Methyl Isobutyl Ketone</td>
<td>108-19-3</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>Hydrocarbon Solvent</td>
<td>64742-89-8</td>
<td>&lt;1</td>
</tr>
<tr>
<td>6</td>
<td>Water</td>
<td>7732-18-5</td>
<td>7</td>
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</tbody>
</table>

Hazardous Materials Identification System (HMIS)

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

ACUTE TOXICITY DATA

<table>
<thead>
<tr>
<th>No.</th>
<th>Acute Oral LD50</th>
<th>Acute Dermal LD50</th>
<th>Acute Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1400 MG/KG – Human</td>
<td></td>
<td>20000 PPM – 10H – Rat</td>
</tr>
<tr>
<td>2</td>
<td>5628 MG/KG – Rat</td>
<td>15800 MG/KG – Rabbit</td>
<td>64000 PPM – 4HR – Rat</td>
</tr>
<tr>
<td>3</td>
<td>5620 MG/KG – Rat</td>
<td>&gt;20 ML/KG – Rabbit</td>
<td>1600 PPM – 8 HR – Rat</td>
</tr>
</tbody>
</table>

HEALTH INFORMATION

The health effects noted below are consistent with requirements under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Eye Contact

Based on presence of components 1, 2, and 4, product is presumed to be mildly to severely irritating to the eyes.

Skin Contact

Based on presence of components 2 and 4, product is presumed to be slightly to moderately irritating to the skin and may be slightly toxic if absorbed through the skin. Prolonged or repeated liquid contact can result in defatting and drying of the skin, which may result in skin irritation and dermatitis.

Inhalation

Based on presence of components 2, 3, and 4, product may cause irritation to the nose, throat and respiratory tract and based on presence of components 3, product is toxic. Based on presence of all components, inhalation may produce CNS depression and liver, kidney and optic nerve damage. Inhalation of vapors of component 5 may result in peripheral neuropathy.
Ingestion
Based on presence of components 4, product is presumed to be moderately toxic. Ingestion of product may product CNS depression and liver damage. Based on the presence of component 5, ingestion of product may result in vomiting; aspiration (breathing) of vomitus into the lungs must be avoided as even small quantities may result in aspiration pneumonitis.

Signs and Symptoms
Irritation as noted above. Early to moderate CNS (central nervous system) depression may be evidenced by giddiness, headache, dizziness and nauseae; in extreme cases, unconsciousness and death may occur. Liver damage may be evidenced by loss of appetite, jaundice (yellowish skin color) and sometimes pain in the upper abdomen on the right side. Kidney damage may be evidenced by changes in urine output, urine appearance or edema (swelling from fluid retention). Optic nerve damage may be evidenced by partial or complete loss of vision. Peripheral nerve damage may be evidenced by muscular weakness and loss of sensation in the arms and legs. Aspiration pneumonitis may be evidenced by coughing, labored breathing and cyanosis (bluish skin). In severe cases, death may occur.

Aggravated Medical Conditions
Preexisting eye, skin, and respiratory disorders may be aggravated by exposure to this product. Impaired liver kidney, optic nerve and peripheral nerve functions from preexisting disorders may be aggravated by exposure to this product.

See section VI for additional health information.

<table>
<thead>
<tr>
<th>No.</th>
<th>OSHA PEL/TWA</th>
<th>ACGIH TLV/TWA</th>
<th>TLV/STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1000 PPM</td>
<td>1000 PPM</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>200 PPM (Skin)</td>
<td>200 PPM (Skin)</td>
<td>250 PPM (Skin)</td>
</tr>
<tr>
<td>3</td>
<td>400 PPM</td>
<td>400 PPM</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>100 PPM</td>
<td>50 PPM</td>
<td>75 PPM</td>
</tr>
<tr>
<td>5</td>
<td>Exposure Guidelines not listed</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

EMERGENCY AND FIRST AID PROCEDURES

Eye Contact
Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Get medical attention.

Skin Contact
Flush skin with water while removing contaminated clothing and shoes. If irritation occurs, get medical attention. Do not reuse clothing or shoes until cleaned.

Inhalation
Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention.

Ingestion
Do not give liquids if victim is unconscious or very drowsy. Otherwise, give no more than 2 glasses of water and induce vomiting by giving 30CC (2 tablespoons) syrup of ipecac.* If ipecac is unavailable, give 2 glasses of water and induce vomiting by touching finger to back of victim’s throat. Keep victim’s head below hips while vomiting. Get medical attention.

Note to Physician
*If victim is a child, give no more than 1 glass of water and 15CC (1 tablespoon) syrup of ipecac. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before emesis, gastric lavage should be considered following intubation with a cuffed endotracheal tube.

SUPPLEMENTAL HEALTH INFORMATION

Persons on Disulfiram (antabuse (R)) therapy should be aware that the ethyl alcohol in this product is hazardous to them just as is alcohol from any source. Disulfiram reactions (vomiting, headache, and even collapse) may follow ingestion of small amounts of alcohol and have also been described from skin contact.

Studies in laboratory animals involving prolonged and repeated exposures to ethyl alcohol have resulted in such effects as liver damage, embryotoxicity, fetotoxicity, and teratogenicity. A transient mutagenic effect has been reported in rats.
Some animal studies have reported degeneration of heart muscle after repeated exposure to high levels of methyl alcohol.

A 1985 publication reports that methyl alcohol was teratogenic in rats by inhalation at 20,000 PPM, 7 hours/day during gestation. Only slight maternal toxicity was observed indicating that methyl alcohol was probably a primary teratogen in the rat under the conditions of exposure. At 5,000 PPM exposure, methyl alcohol was not teratogenic. (Fund APPL TOX, 5:727, 1985)

Component 5 of this product may contain certain isoparaffins that have been demonstrated to cause kidney effects in male rats and cardiac sensitization in other species. The relevance of the kidney effects to man is unknown. There is no evidence that exposure to industrially acceptable levels of hydrocarbons (E.G., THE TLV) have produced cardiac effects in humans. Such sensitization however, may cause fatal changes in heart rhythm. This latter effect has been shown to be enhanced by hypoxia or the injection of adrenaline-like agents.

**PHYSICAL DATA**

<table>
<thead>
<tr>
<th>Boiling Point (DEG F)</th>
<th>163-174</th>
<th>Specific Gravity: .789 to .806 (H20=1)</th>
<th>Vapor Pressure: 44 @ 68 DEG. F (MM HG) (Estimated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting Point: Not Available (DEG F)</td>
<td>Solubility: Complete (in water)</td>
<td>Vapor Density: 1.8 (Air-1) (Estimated)</td>
<td></td>
</tr>
</tbody>
</table>

Evaporation rate (N-Butyl Acetate=1): 1.7 (Estimated)

**Appearance and Odor**

Light colorless liquid. Alcohol like Odor

**REACTIVITY**

**NFPA Rating**

Health - 0, Flammability - 3, Reactivity - 0

**Stability:** Stable

**Hazardous Polymerization:** Will not occur

**Conditions and Materials to Avoid:**

Avoid heat, sparks, flame and contact with strong oxidizing agents. Do not store or handle in aluminum equipment at temperatures over 120 Deg. F.

**Hazardous Decomposition Products**

Carbon Monoxide and unidentified organic compounds may be formed during combustion. atmosphere supplying respirator or an air purifying respirator for organic vapors.
EMPLOYEE PROTECTION

Respiratory Protection
Avoid breathing vapor
Use a NIOSH approved respirator as required to prevent overexposure. In accord with 29CFR 1910.134, use either a full-face

OSHA has established transitional occupational exposure limits for this product and/or components of this product. Refer to 29 CFR 1910.1000 for these transitional limits and requirements for meeting these limits.

Protective Clothing
Avoid contact with eyes. Wear chemical goggles if there is likelihood of contact with eyes. Avoid prolonged or repeated contact with skin. Wear gloves and other clothing as required to minimize contact.

Additional Protective Measures
Use explosion proof ventilation as required to control vapor concentrations. Eye wash fountains and safety showers should be available for emergency use.

ENVIRONMENTAL PROTECTION

Spill or Leak Procedures
Warning. Flammable. Eliminate all ignition sources. Handling equipment must be grounded to prevent sparking.
***LARGE SPILLS***Evacuate the hazard area of unprotected personnel. Wear appropriate respirator and protective clothing. Shut off source of leak only if safe to do so. Dike and contain. If vapor cloud forms; water fog may be used to suppress; contain run-off. Remove with vacuum trucks or pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand or other suitable material; place in non-leaking containers for proper disposal. Flush area with water to remove trace residue; dispose of flush solutions as above. ***SMALL SPILLS***Take up with an absorbent material and place in non-leaking containers; seal tightly for proper disposal.

SPECIAL PRECAUTIONS
Vapors may accumulate and travel to ignition sources distant from the handling site; flash fire can result. Keep containers closed when not in use. Use (only) with adequate ventilation.

Wash with soap and water before eating, drinking, smoking or using toilet facilities. Launder contaminated clothing before reuse.

Do not store or handle in aluminum equipment at temperatures over 120 DEG. F.

TRANSPORTATION REQUIREMENTS

D.O.T. Proper Shipping Name
Denatured Alcohol/3/UN1987/PGII

OTHER REGULATORY CONTROLS
The components of this product are listed on the EPA/TSCA inventory of chemical substances.

SPECIAL NOTES
The information contained herein is based on the data available to us and is believed to be correct. However, Savogran makes no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Savogran assumes no responsibility for injury from the use of the product described herein.