EMERGENCY OVERVIEW:
- WARNING! FLAMMABLE LIQUID AND VAPOR. HARMFUL IF INHALED OR INGESTION. MAY BE FATAL IF INGESTED. MAY CAUSE SEVERE RESPIRATORY TRACT IRRITATION WITH POSSIBLE BURNS. MAY CAUSE SEVERE DIGESTIVE TRACT IRRITATION WITH POSSIBLE BURNS.

ROUTE OF ENTRY:
- Ingestion, Inhalation, Dermal Contact, Eye Contact

HAZARD SYMBOLS:
- Methyl Alcohol: T F
- Propargyl Alcohol: T C

ACUTE EFFECT ON HUMANS:
- Methanol poisoning can cause blindness and death. The lethal oral dose in humans is 2 to 8 ounces. Most cases have occurred after ingestion. Methanol poisoning after inhalation or skin absorption in the workplace has been reported. Symptoms of methanol poisoning include initial CNS depression and vomiting followed by metabolic acidosis and severe vision impairment 8-24 hours later. Coma, respiratory failure, and death may ensue. In high-dose reproductive studies in animals, methyl alcohol causes testicular damage and birth defects. Patients may present with inebriation and gastritis. There is a characteristic latency of 6-30 hours after exposure. Combined osmolar and anion gaps suggest poisoning by methanol or ethylene glycol, but also may occur in severe alcoholic ketoacidosis or diabetic ketoacidosis.
Propargyl Alcohol is irritating to the eyes, the skin and the respiratory tract. The vapor irritates the eyes, the skin, and the respiratory tract. The substance may cause effects on the liver and kidneys, resulting in impaired functions. Exposure above the OEL may result in death. Medical observation is indicated.

CHRONIC EFFECTS ON HUMANS:
- This substance is toxic to the nervous system, the reproductive system. Passes through the placental barrier. May be fatal or cause blindness if swallowed. (methyl alcohol)

OSHA REGULATIONS:
- This substance is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

RISK PHRASES:
- Methyl Alcohol : R 11,23/24/25,39,23/24/25
- Propargyl Alcohol : R 10,23/24/25,34

SAFETY PHRASES:
- Methyl Alcohol : S 7,16,24,36,37,45
- Propargyl Alcohol : S 9,16,26,28A,33,36,45

NFPA RATING: 

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>PERCENT</th>
<th>CAS NUMBER</th>
<th>PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>METHYL ALCOHOL</td>
<td>30-60</td>
<td>67-56-1</td>
<td>200 ppm</td>
</tr>
<tr>
<td>PROPARGYL ALCOHOL</td>
<td>8-10</td>
<td>107-19-7</td>
<td>1 ppm</td>
</tr>
<tr>
<td>THIOUREA/FORMALDEHYDE COPOLYMER</td>
<td>10-30</td>
<td>68527-49-1</td>
<td>NA</td>
</tr>
<tr>
<td>POLYETHOXYLATED ALCOHOL SURFACTANT</td>
<td>10-30</td>
<td>68951-67-7</td>
<td>NA</td>
</tr>
<tr>
<td>C-14 to C-16 ALPHA OLEFINS</td>
<td>2-5</td>
<td>64743-02-8</td>
<td>NA</td>
</tr>
</tbody>
</table>
SECTION IV – FIRST AID MEASURES

INHALATION:
- **SLIGHT INHALATION**: Allow victim to rest in a well-ventilated area. Seek immediate medical attention.
- **HAZARDOUS INHALATION**: Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waist band. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

INGESTION:
- Remove dentures if any. Watch for an obstruction in the victim's mouth. Remove if possible what is causing the obstruction but do not force fingers or a hard object between the victim's teeth. Have conscious person drink several glasses of water or milk. INDUCE VOMITING by sticking finger in throat. Seek medical attention.

EYE CONTACT:
- Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do NOT use an eye ointment. Seek medical attention.

SKIN CONTACT:
- Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention. If the chemical got onto the clothed portion of the body, remove the contaminated clothes as quickly as possible, protecting your own hands and body. Place the victim under a deluge shower. If the chemical touches the victim's exposed skin, such as the hands: Neutralize exposed skin with a dilute solution of sodium carbonate. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. COLD water may be used. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

SECTION V – FIRE FIGHTING MEASURES

FLASHPOINT:
- 54°F Closed Cup

FLAMMABLE CONDITIONS:
- Explosive in the form of vapor when exposed to heat or flame.
- Vapor may travel considerable distance to source of ignition and flash back. When heated to decomposition, it emits acrid smoke and irritating fumes

EXTINGUISHING MEDIA:
- Flammable liquid, soluble or dispersed in water.

SPECIAL FIRE FIGHTING PROCEDURES:
- SMALL: Use dry chemical powder.
- LARGE: Use alcohol foam, water spray or fog.

SPECIAL FIRE AND EXPLOSION HAZARDS:
- Explosive in the form of vapor when exposed to heat or flame.
- Vapor may travel considerable distance to source of ignition and flash back.
- When heated to decomposition, it emits acrid smoke and irritating fumes.
PERSONAL PRECAUTIONS:
- Evacuate surrounding areas. Keep unwarranted and unprotected personnel from entering the area. Shut off all ignition sources. No flares, smoking or open flames in hazard area. Wear appropriate personal protective equipment when in hazard area. Ventilate closed spaces before entry.

CLEAN-UP METHODS:
- **SMALL SPILL**: Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.
- **LARGE SPILL**: Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Be careful that the product us not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

ENVIRONMENTAL PRECAUTIONS:
- Prevent entry into sewers, basements or confined areas. Dike if necessary.

HANDLING:
- Wear appropriate personal protective equipment when handling.
- Keep away from heat and all sources of ignition.
- Keep in secure location.
- Ground all equipment containing material.
- DO NOT ingest; If ingested, seek medical advice immediately and show label or container
- Do not breathe gas, fumes, vapors or spray. In case of insufficient ventilation, wear suitable respiratory equipment.
- Avoid contact with skin and eyes.
- Keep away from incompatibles as oxidizing agents, acids.

STORAGE:
- Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat.
- Keep away from sources of ignition.
- Keep container tightly closed.
- Keep in a cool, well-ventilated place.
- Ground all equipment containing material.
- A refrigerated room would be preferable for materials with a flash point lower than 37.8°C (100°F)
### SECTION VIII – EXPOSURE CONTROLS / PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>CHEMICAL INGREDIENT</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - FINAL PELS</th>
<th>OSHA - VACATED PELS</th>
</tr>
</thead>
<tbody>
<tr>
<td>METHYL ALCOHOL</td>
<td>200 ppm, 262mg/m3 TWA; 250 ppm, 327mg/m3 STEL</td>
<td>200 ppm, 260mg/m3 TWA; 250 ppm, 325mg/m3 STEL</td>
<td>200 ppm TWA; 260 mg/m3 TWA</td>
<td>200 ppm TWA; 260 mg/m3 TWA; 250 ppm STEL; 325 mg/m3 TWA</td>
</tr>
<tr>
<td>PROPARGYL ALCOHOL</td>
<td>1 ppm, 2.3 mg/m3 TWA</td>
<td>1 ppm TWA; 2 mg/m3 TWA</td>
<td>1 ppm, 2.3 mg/m3 TWA</td>
<td>None Listed</td>
</tr>
</tbody>
</table>

**ODOR THRESHOLD:**
- Methyl Alcohol: (Low): 4.2 ppm; (High): 5960 ppm
- Propargyl Alcohol: 0.15 ppm

**LETHAL CONCENTRATION:**
- Methyl Alcohol: LC₅₀ (Rats): 64,000 ppm/4hr

**RESPIRATORY PROTECTION:**
- Use MSHA/NIOSH approved respirator or equivalent

**PROTECTIVE CLOTHING/EQUIPMENT:**
- Goggles, lab coat/ apron, gloves

**ENGINEERING CONTROLS:**
- Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower. Use adequate ventilation to keep airborne concentrations below recommended or statutory limits.

### SECTION IX – PHYSICAL & CHEMICAL PROPERTIES

- **APPEARANCE:** Tan to Brown Clear Liquid
- **ODOR:** Sweet, alcoholic
- **BOILING POINT:** ND
- **FLASHPOINT:** 54°F Closed Cup
- **VAPOR DENSITY (AIR=1):** ND
- **VAPOR PRESSURE:** ND
- **EVAPORATIVE RATE:** ND
- **SPECIFIC GRAVITY (WATER=1):** 0.86
- **pH:** 4-5
- **WT:** 7.16 # per gallon

### SECTION X – STABILITY & REACTIVITY

- **STABILITY:** The product is stable.
- **CORROSIVITY:** Slightly corrosive to corrosive to brass, aluminum, mild steel.
- **REACTIVITY:** Reactive with oxidizing agents, acids. Slightly reactive to reactive with moisture.

*NOTE: Only components of this product with established exposure limits appear in above chart.*
ACUTE TOXICITY:

<table>
<thead>
<tr>
<th>CHEMICAL</th>
<th>RESULT</th>
<th>SPECIES</th>
<th>DOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Alcohol</td>
<td>LD₅₀ Dermal</td>
<td>Rabbit</td>
<td>15800 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LD₅₀ Oral</td>
<td>Rabbit</td>
<td>14200 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LD₅₀ Oral</td>
<td>Rat</td>
<td>5600 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LC₅₀ Inhalation Gas</td>
<td>Rat</td>
<td>64000 ppm</td>
</tr>
<tr>
<td></td>
<td>LC₅₀ Inhalation Vapor</td>
<td>Mouse</td>
<td>50000 ppm</td>
</tr>
<tr>
<td>Propargyl Alcohol</td>
<td>LD₅₀ Oral</td>
<td>Rat(Male)</td>
<td>110 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rat(Female)</td>
<td>55 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LD₅₀ Oral</td>
<td>Mouse</td>
<td>50 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LD₅₀ Oral</td>
<td>Guinea Pig</td>
<td>60 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LD₅₀ Dermal</td>
<td>Rabbit</td>
<td>88 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LC₅₀ Inhalation (1 hour)</td>
<td>Rat(Male)</td>
<td>1200 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rat(Female)</td>
<td>1040 ppm</td>
</tr>
<tr>
<td></td>
<td>LC₅₀ Inhalation (2 hour)</td>
<td>Rat &amp; Mouse</td>
<td>850 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mouse</td>
<td>1000 mg/m³</td>
</tr>
</tbody>
</table>

- Methanol poisoning can cause blindness and death. The lethal oral dose in humans is 2 to 8 ounces. Most cases have occurred after ingestion. Methanol poisoning after inhalation or skin absorption in the workplace has been reported. Symptoms of methanol poisoning include initial CNS depression and vomiting followed by metabolic acidosis and severe vision impairment 8-24 hours later. Coma, respiratory failure, and death may ensue. In high-dose reproductive studies in animals, methyl alcohol causes testicular damage and birth defects. Patients may present with inebriation and gastritis. There is a characteristic latency of 6-30 hours after exposure. Combined osmolar and anion gaps suggest poisoning by methanol or ethylene glycol, but also may occur in severe alcoholic ketoacidosis or diabetic ketoacidosis.
- Propargyl Alcohol is a primary skin irritant (but not a sensitizer), and a severe eye and mucous membrane irritant. It is toxic by ingestion, inhalation, and skin adsorption. The vapor irritates the eyes, the skin, and the respiratory tract. The substance may cause effects on the liver and kidneys, resulting in impaired functions. Exposure above the OEL may result in death. Medical observation is indicated.

ENVIRONMENTAL:

- Methyl Alcohol: Dangerous to aquatic life in high concentrations. Aquatic toxicity rating: TLm 96>1000 ppm. Expected to biodegrade in soil and water very rapidly. This product will show high soil mobility and will be degraded from the ambient atmosphere by the reaction with photochemically produced hydroxyl radicals with an estimated half-life of 17.8 days, the BCF value is estimated to be 0.2.
• Propargyl Alcohol: If released to air, an extrapolated vapor pressure of 15.6 mm Hg at 25°C indicates propargyl alcohol will exist solely as a vapor in the atmosphere. Vapor-phase propargyl alcohol will be degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals; half-life for this reaction is estimated to be 37 hours. Propargyl alcohol does not contain chromophores that absorb at wavelengths >290 nm and therefore is not expected to be susceptible to direct photolysis by sunlight. If released to soil, propargyl alcohol is expected to have very high mobility based upon an estimated Koc of 14. Volatilization from moist soil surfaces is expected to be an important fate process based upon an estimated Henry's Law constant of 1.1X10^-6 atm-cu m/mole. Propargyl alcohol may volatilize from dry soil surfaces based upon its extrapolated vapor pressure. The bio-degradation half-life of propargyl alcohol was 12.6 and 13 days in an alkaline sandy silt loam and an acidic sandy loam. If released into water, propargyl alcohol is not expected to adsorb to suspended solids and sediment based upon the estimated Koc. Volatilization from water surfaces is expected to be an important fate process based upon this compound's estimated Henry's Law constant. Estimated volatilization half-lives for a model river and model lake are 16 and 176 days, respectively. An estimated BCF of 3 suggests the potential for bioconcentration in aquatic organisms is low. Hydrolysis is not expected to be an important environmental fate process.

ECOTOXICITY:
• Methyl Alcohol:
  • Fish: Fathead Minnow: 29.4 g/L; 96 Hr; LC50 Fish: Goldfish: 250 ppm; 11 Hr; resulted in death; Fish: Rainbow trout: 8000 mg/L; 48 Hr; LC50 Fish: Rainbow trout: LC50 = 13-68 mg/L; 96 Hr.; 12 degrees C; Fish: Fathead Minnow: LC50 = 29400 mg/L; 96 Hr.; 25 degrees C, pH 7.63 Fish: Rainbow trout: LC50 = 8000 mg/L; 48 Hr.; Phytobacterium phosphoreum: EC50 = 51,000-320,000 mg/L; 30 minutes
• Propargyl Alcohol:
  • Water flea EC50 = 7.6 mg/L; 48 Hr.; Static, 21-23 degrees C, pH 7.4-9.4Fish: Fathead Minnow: LC50 =1.44-1.53 mg/L; 96 Hr.; Flow-through condition; 24.7-25.7 degrees C No data available.

SECTION XIII – DISPOSAL CONSIDERATIONS

RCRA WASTE NUMBER:
• Methyl Alcohol: U154
• Propargyl Alcohol: P102

WASTE DISPOSAL:
• Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility.
• Processing, use or contamination of this product may change the waste management options.
• Dispose of container and unused contents in accordance with federal, state and local requirements. State and local disposal regulations may differ from federal disposal regulations.
SECTION XIV – TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>PROPER SHIPPING NAME:</th>
<th>FLAMMABLE LIQUID, N.O.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAZARD CLASS:</td>
<td>3</td>
</tr>
<tr>
<td>UN NUMBER:</td>
<td>UN 1993</td>
</tr>
<tr>
<td>GUIDE NUMBER:</td>
<td>128</td>
</tr>
<tr>
<td>PACKAGING GROUP:</td>
<td>II</td>
</tr>
<tr>
<td>RQ:</td>
<td>139.7 Gallons (Propargyl Alcohol)</td>
</tr>
<tr>
<td>DOT SHIPPING:</td>
<td>Flammable liquid, n.o.s., (Contains Methyl Alcohol, Propargyl Alcohol), 3, UN 1993, PG II</td>
</tr>
</tbody>
</table>

SECTION XV – REGULATORY INFORMATION

TSCA STATUS:
- All components of this product are listed on the TSCA inventory.

CERCLA:
- Methyl Alcohol: RQ 5000lbs.
- Propargyl Alcohol: RQ 1000lbs. (139.7 Gallons)

CAA:
- Methyl Alcohol is listed as a hazardous air pollutant (HAP)
- This material does not contain any Class 1 Ozone depletors
- This material does not contain any Class 2 Ozone depletors

CWA:
- None of the chemicals in this product are listed as Hazardous Substances under the CWA
- None of the chemicals in this product are listed as Priority Pollutants under the CWA
- None of the chemicals in the product are listed as Toxic Pollutants under the CWA

OSHA IMIS CODE NUMBER:
- Methyl Alcohol: 1660
- Propargyl Alcohol: 2167

RTECS NUMBER:
- Methyl Alcohol : PC1400000
- Propargyl Alcohol : UK5075000; 68751

SARA 302 (EHS) TPQ: None

SARA 304 (EHS) RQ:
- Methyl Alcohol: 5,000 lbs
- Propargyl Alcohol: 1,000 lbs

SARA 311/312 (Classification):
- Methyl Alcohol: Fire Hazard, Immediate (acute) Health Hazard, Chronic Health Hazard
- Propargyl Alcohol: Fire Hazard, Immediate (Acute ) Health Hazard, Reactive

SARA 313 Reporting Requirements:. Methyl Alcohol, Propargyl Alcohol
HAZARD SYMBOLS:
- Methyl Alcohol: T (Toxic); F (Highly Flammable)
- Propargyl Alcohol: T (Toxic); C (Corrosive)

RISK PHRASES:
- Methyl Alcohol:
  - R 11: Highly flammable
  - R 23/24/25: Toxic by inhalation, contact with skin and if swallowed
  - R 39/23/24/25: Danger of very serious irreversible effects through inhalation, contact with skin and if swallowed
- Propargyl Alcohol:
  - R 10: Flammable
  - R 23/24/25: Toxic by inhalation, contact with skin and if swallowed
  - R 34: Cause Burns

SAFETY PHRASES:
- Methyl Alcohol:
  - S 7: Keep container tightly closed.
  - S 16: Keep away from sources of ignition: NO SMOKING
  - S 24: Avoid contact with skin.
  - S 36: Wear suitable protective clothing.
  - S 37: Wear suitable gloves
  - S 45: In case of accident or if you feel unwell, seek medical advice immediately (show label whenever possible)
- Propargyl Alcohol:
  - S 9: Keep container in a well-ventilated place.
  - S 16: Keep away from sources of ignition: NO SMOKING
  - S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advise
  - S 28A: After contact with skin, wash immediately with plenty of water.
  - S 33: Take precautionary measures against static discharges.
  - S 36: Wear suitable protective clothing.
  - S 45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

NFPA RATING:

HMIS:

Can cause temporary incapacitation or residual injury
Can be ignited under almost all ambient temperatures
Normally stable. High temperatures make unstable

Dangerous: Protective measures are indicated
FP <100°F: Flammable, Volatile or Explosive under most temperatures: Take caution in storage and handling
Normally stable. High temperatures make unstable
PPE: Splash Goggles, Gloves, Lab Coat, Vapor Respirator
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