Eye Exposure
In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

Section 5 - Fire Fighting Measures

Flammable Hazards: Yes  Peroxide Former: Yes

Explosion Hazards
Vapor may travel considerable distance to source of ignition and flash back.
Container explosion may occur under fire conditions.

Flash Point: 1.4 °F -17 °C

Explosion Limits:
     Lower: 1.6 %    Upper: 11.8 %

Autoignition Temp: 321 °C

Extinguishing Media
Suitable
     Carbon dioxide, dry chemical powder, or appropriate foam.

Specific Hazard(s)
Flammable liquid. Emits toxic fumes under fire conditions.

Specific Methods of Fire Fighting
Use water spray to cool fire-exposed containers.

Section 6 - Accidental Release Measures

Procedure to be Followed in Case of Leak or Spill
Evacuate area. Shut off all sources of ignition.

Procedure(s) of Personal Protection
Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

Methods for Cleaning Up
Cover with dry-tissue, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling
User Exposure
     Avoid breathing vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

Storage
Suitable
     Keep container closed. Keep away from heat, sparks, and open flame. Store under nitrogen.

Special Requirements
Test for peroxide formation periodically and before distillation. Do not distill dryness.

Section 8 - Exposure Controls / PPE

Engineering Controls
Safety shower and eye bath. Use nonsparking tools. Mechanical exhaust required.

Personal Protective Equipment

Aldrich Chemical - 401757
Section 9 - Physical/Chemical Properties

Appearance

Color: Colorless
Form: Clear liquid

Molecular Weight: 72.11 AMU

Property

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>At Temperature or Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>BP/BP Range</td>
<td>66 - 77 °C</td>
<td>760 mmHg</td>
</tr>
<tr>
<td>M/P/M Range</td>
<td>-108 °C</td>
<td></td>
</tr>
<tr>
<td>Freezing Point</td>
<td>N/A</td>
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<tr>
<td>Vapor Pressure</td>
<td>143 mmHg</td>
<td>20 °C</td>
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<tr>
<td>Vapor Density</td>
<td>2.5 g/l</td>
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<tr>
<td>Saturated Vapor Conc.</td>
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<tr>
<td>SG/Density</td>
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<tr>
<td>Bulk Density</td>
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</tr>
<tr>
<td>Odor Threshold</td>
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<tr>
<td>Viscosity</td>
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<tr>
<td>Partition Coefficient</td>
<td>Log Kow: 0.49</td>
<td>20 °C</td>
</tr>
<tr>
<td>Decomposition Temp.</td>
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</tr>
<tr>
<td>Flash Point °F</td>
<td>1.4 °F</td>
<td></td>
</tr>
<tr>
<td>Flash Point °C</td>
<td>-17 °C</td>
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<tr>
<td>Explosion Limits</td>
<td>Lower: 1.8 %</td>
<td>Upper: 11.9 %</td>
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<tr>
<td>Flammability</td>
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<tr>
<td>Autoignition Temp</td>
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<tr>
<td>Refractive Index</td>
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<tr>
<td>Solubility</td>
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</tbody>
</table>

Section 10 - Stability and Reactivity

Stability

Stable.

Materials to Avoid

Oxidizing agents, Oxygen.

Hazardous Decomposition Products

Hazardous Decomposition Products
Carbon monoxide, Carbon dioxide.

Hazardous Polymerization

Hazardous Polymerization
Will not occur.

Section 11 - Toxicological Information

Route of Exposure

Skin Contact
Causes skin irritation.

Skin Absorption
May be harmful if absorbed through the skin.

Eye Contact
Causes eye irritation.

Inhalation
Material is irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.

Ingestion
Harmful if swallowed.

Target Organ(s) or System(s)
Central nervous system. Liver, Kidneys.

Signs and Symptoms of Exposure

Can cause CNS depression. Exposure can cause: Coughing, chest pain, difficulty in breathing. Exposure to high airborne concentrations can cause anesthetic effects. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Toxicity Data

Oral - Rat: 1,650 mg/kg (LD50)

Inhalation - Rat: 21,000 ppm (LC50)

Intraperitoneal - Rat: 2500 mg/kg (LD50)

Intraperitoneal - Mouse: 1900 mg/kg (LD50)

Oral - Guinea pig: 2,300 mg/kg (LD50)

Chronic Exposure Carcinogen

Result: This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

Rat - Inhalation: 1900 PPM 6H/24Y

Mouse - Inhalation: 1900 PPM 6H/24Y
Result: Tumorogenic/Carcinogenic by RTECS criteria. Liver. Tumors.
Section 12 - Ecological Information

Acute Ecotoxicity Tests

Test Type: LC50 Fish
Species: Pimephales promelas (Fathead minnow)
Time: Value:
96.0 h: 2.160 mg/l

Test Type: EC50 Daphnia
Species: Daphnia magna
Time: Value:
24.0 h: 5.930 mg/l

Section 13 - Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation
Contact a licensed professional waste disposal service to dispose of this material. Burn in a chemical incinerator equipped with an afterburner and scrubber but wear extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT
Proper Shipping Name: Tetrahydrofuran
UN#: 2056
Class: 3
Packing Group: Packing Group II
Hazard Label: Flammable liquid
PIH: Not PIH

IATA
Proper Shipping Name: Tetrahydrofuran
IATA Number: 2056
Hazard Class: 3
Packing Group: II