Section 1 - Product and Company Information

Product Name                      1-METHYL-1-CYCLOHEXENE, 97%
Product Number                    129801
Brand                              ALDRICH
Company                            Sigma-Aldrich
Street Address                     3050 Spruce Street
City, State, Zip, Country          SAINT LOUIS MO 63103 US
Technical Phone:                   314 771 5765
Emergency Phone:                   414 273 3850 Ext. 5996
Fax:                               800 325 5052

Section 2 - Composition/Information on Ingredient

<table>
<thead>
<tr>
<th>Substance Name</th>
<th>CAS #</th>
<th>SARA 313</th>
</tr>
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<tr>
<td>1-METHYL-1-CYCLOHEXENE</td>
<td>591-49-1</td>
<td>No</td>
</tr>
</tbody>
</table>

Formula                           C7H12

Section 3 - Hazards Identification

EMERGENCY OVERVIEW
- Flammable (USA) Highly Flammable (EU). Irritant.
- Irritating to eyes, respiratory system and skin.

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE
- If swallowed, do not induce vomiting; call a physician immediately.

INHALATION EXPOSURE
- If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

DERMAL EXPOSURE
- In case of contact, immediately wash skin with soap and copious amounts of water.

EYE EXPOSURE
- In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

Section 5 - Fire Fighting Measures

EXPLOSION HAZARDS
- Vapor may travel considerable distance to source of ignition and flash back.
FLASH POINT
30.2 °F - 1.0 °C Method: closed cup

AUTOIGNITION TEMP
N/A

FLAMMABILITY
N/A

EXTINGUISHING MEDIA
Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING
Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Flammable liquid. Vapor may travel considerable distance to source of ignition and flash back. Emits toxic fumes under fire conditions.

EXPOSURE HAZARD(S)
Material: Irritant.

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 PRECAUTION(S)
Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP
Cover with dry-lime, 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: Do not breathe vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE
Suitable: Keep tightly closed. Keep away from heat, sparks, and open flame. Store in a cool dry place.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS
Safety shower and eye bath. Mechanical exhaust required. Use nonsparking tools.

PERSONAL PROTECTIVE EQUIPMENT
Other: Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.

GENERAL HYGIENE MEASURES
Wash thoroughly after handling. Wash contaminated clothing before reuse.
Section 9 - Physical/Chemical Properties

Appearance
Color: Colorless
Form: Clear liquid

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>At Temperature or Pressure</th>
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</thead>
<tbody>
<tr>
<td>Molecular Weight</td>
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<tr>
<td>pH</td>
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<tr>
<td>BP/BP Range</td>
<td>110.0 - 111.0 °C</td>
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<td>MP/MP Range</td>
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<tr>
<td>Freezing Point</td>
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<tr>
<td>Vapor Pressure</td>
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<tr>
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<td>Saturated Vapor Conc.</td>
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<tr>
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<tr>
<td>Solvent Content</td>
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<tr>
<td>Viscosity</td>
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<tr>
<td>Partition Coefficient</td>
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<td>Decomposition Temp.</td>
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<td>Method: closed cup</td>
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<td>Explosion Limits</td>
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<tr>
<td>Flammability</td>
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<td>Miscellaneous Data</td>
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<tr>
<td>Solubility</td>
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</tbody>
</table>

N/A = not available

Section 10 - Stability and Reactivity

STABILITY
Materials to Avoid: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS
Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

Section 11 - Toxicological Information

ROUTE OF EXPOSURE
Skin Contact: Causes skin irritation.
Multiple Routes: Vapor or mist is irritating to the eyes, mucous membranes, and upper respiratory tract. May be harmful by inhalation, ingestion, or skin absorption.

SIGNS AND SYMPTOMS OF EXPOSURE
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12 - Ecological Information

No data available.
Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

IATA
Proper Shipping Name: Hydrocarbons, liquid, n.o.s.
IATA UN Number: 3295
Hazard Class: 3
Packing Group: II

Section 15 - Regulatory Information

EU ADDITIONAL CLASSIFICATION
Symbol of Danger: F-Xn
R: 11-36/37/38-65
Risk Statements: Highly flammable. Irritating to eyes, respiratory system and skin. Harmful: may cause lung damage if swallowed.
S: 16-26-36-62
Safety Statements: Keep away from sources of ignition - no smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing. If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

US CLASSIFICATION AND LABEL TEXT
Risk Statements: Irritating to eyes, respiratory system and skin. Safety Statements: Keep away from sources of ignition - no smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection.

UNITED STATES REGULATORY INFORMATION
SARA LISTED: No

CANADA REGULATORY INFORMATION
WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: No
NDSL: Yes

Section 16 - Other Information

DISCLAIMER
For R&D use only. Not for drug, household or other uses.

WARRANTY
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to
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