# Material Safety Data Sheet

**1. PRODUCT AND COMPANY IDENTIFICATION**

<table>
<thead>
<tr>
<th>Product name</th>
<th>1-Hexene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Number</td>
<td>320323</td>
</tr>
<tr>
<td>Brand</td>
<td>Aldrich</td>
</tr>
<tr>
<td>Supplier</td>
<td>Sigma-Aldrich Corporation</td>
</tr>
<tr>
<td>Supplier Address</td>
<td>3050 Spruce Street, SAINT LOUIS MO 63103 USA</td>
</tr>
<tr>
<td>Telephone</td>
<td>+1 800-325-5832</td>
</tr>
<tr>
<td>Fax</td>
<td>+1 800-325-5052</td>
</tr>
<tr>
<td>Emergency Phone #</td>
<td>(314) 776-6555</td>
</tr>
<tr>
<td>Preparation Information</td>
<td>Sigma-Aldrich Corporation</td>
</tr>
<tr>
<td></td>
<td>Product Safety - Americas Region</td>
</tr>
<tr>
<td></td>
<td>1-800-521-8956</td>
</tr>
</tbody>
</table>

**2. HAZARDS IDENTIFICATION**

**Emergency Overview**

- **OSHA Hazards**
  - Flammable liquid

- **Target Organs**
  - Central nervous system

**GHS Classification**

- Flammable liquids (Category 2)
- Aspiration hazard (Category 1)

**GHS Label elements, including precautionary statements**

- **Pictogram**: Flammable liquid and aspiration hazard
- **Signal word**: Danger
- **Hazard statement(s)**
  - H225: Highly flammable liquid and vapour.
  - H304: May be fatal if swallowed and enters airways.
- **Precautionary statement(s)**
  - P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  - P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
  - P331: Do NOT induce vomiting.

**HMIS Classification**

- Health hazard: 0
- Flammability: 3
- Physical hazards: 0

**NFPA Rating**

- Health hazard: 0
- Fire: 3
- Reactivity Hazard: 0
Potential Health Effects

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
Skin: May be harmful if absorbed through skin. May cause skin irritation.
Eyes: May cause eye irritation.
Ingestion: May be harmful if swallowed. Aspiration hazard if swallowed - can enter lungs and cause damage.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Formula | C₆H₁₂ |
| Molecular Weight | 84.16 g/mol |

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>592-41-6</td>
<td>209-753-1</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

Special protective equipment for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products
Hazardous decomposition products formed under fire conditions. - Carbon oxides

Further information
Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

7. HANDLING AND STORAGE
Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hex-1-ene</td>
<td>592-41-6</td>
<td>TWA</td>
<td>50 ppm</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
</tbody>
</table>

Remarks Central Nervous System impairment

Personal protective equipment

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection
Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Form liquid
Colour colourless

Safety data
pH no data available
Melting point/freezing point -140.0 °C (-220.0 °F)
Boiling point 60 - 66 °C (140 - 151 °F) - lit.
Flash point -25.0 °C (-13.0 °F) - closed cup
Ignition temperature 253 °C (487 °F)
Autoignition temperature 253.0 °C (487.4 °F)
### 10. STABILITY AND REACTIVITY

**Chemical stability**
Stable under recommended storage conditions.

**Possibility of hazardous reactions**
Vapours may form explosive mixture with air.

**Conditions to avoid**
Heat, flames and sparks. Extremes of temperature and direct sunlight.

**Materials to avoid**
Acids, Oxidizing agents

**Hazardous decomposition products**
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - no data available

### 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

**Oral LD50**
no data available

**Inhalation LC50**
LC50 Inhalation - rat - 4.0 h - 32000. ppm

**Dermal LD50**
no data available

**Other information on acute toxicity**
no data available

**Skin corrosion/irritation**
no data available

**Serious eye damage/eye irritation**
no data available

**Respiratory or skin sensitization**
no data available

**Germ cell mutagenicity**

**Carcinogenicity**
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable,
possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
no data available

Teratogenicity
no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available

Aspiration hazard
May be fatal if swallowed and enters airways. The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Potential health effects

Inhalation  May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion  May be harmful if swallowed. Aspiration hazard if swallowed - can enter lungs and cause damage.
Skin  May be harmful if absorbed through skin. May cause skin irritation.
Eyes  May cause eye irritation.

Signs and Symptoms of Exposure
burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, May cause cyanosis.

Synergistic effects
no data available

Additional Information
RTECS: MP6670000

12. ECOLOGICAL INFORMATION

Toxicity
no data available

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS
Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 2370 Class: 3 Packing group: II
Proper shipping name: 1-Hexene
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN number: 2370 Class: 3 Packing group: II EMS-No: F-E, S-D
Proper shipping name: 1-HEXENE
Marine pollutant: No

IATA
UN number: 2370 Class: 3 Packing group: II
Proper shipping name: 1-Hexene

15. REGULATORY INFORMATION

OSHA Hazards
Flammable liquid

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Fire Hazard

Massachusetts Right To Know Components

Hex-1-ene
CAS-No. 592-41-6 Revision Date 2007-03-01

Pennsylvania Right To Know Components

Hex-1-ene
CAS-No. 592-41-6 Revision Date 2007-03-01

New Jersey Right To Know Components

Hex-1-ene
CAS-No. 592-41-6 Revision Date 2007-03-01

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Further information
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