1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Hexane, mixture of isomers

Product Number : 439185
Brand : Sigma-Aldrich

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO  63103
USA

Telephone : +18003255832
Fax : +18003255052
Emergency Phone # : (314) 776-6555

2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Hexanes
            Isohexane

Formula : C₆H₁₄

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Concentration</th>
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<tr>
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<td>96-14-0</td>
<td>202-481-4</td>
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<td></td>
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<tr>
<td>-</td>
<td>-</td>
<td>-</td>
<td>&gt;= 20 - &lt;= 25 %</td>
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3. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Flammable liquid, Target Organ Effect, Toxic by ingestion, Irritant, Reproductive hazard
Target Organs
Peripheral nervous system, Kidney, Testes.

HMIS Classification
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<th>2</th>
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<tr>
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<tr>
<td>Chronic Health Hazard:</td>
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<td>Flammability:</td>
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<td>Physical hazards:</td>
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NFPA Rating
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<tr>
<td>Health hazard:</td>
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<tr>
<td>Fire:</td>
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<tr>
<td>Reactivity Hazard:</td>
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</table>

Potential Health Effects

**Inhalation**
May be harmful if inhaled. Causes respiratory tract irritation. Vapours may cause drowsiness and dizziness.

**Skin**
May be harmful if absorbed through skin. Causes skin irritation.

**Eyes**
Causes eye irritation.

**Ingestion**
Toxic if swallowed. Aspiration hazard if swallowed - can enter lungs and cause damage.

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**
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**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

**Flammable properties**
- Flash point: -23 °C (-9 °F)
- Ignition temperature: no data available

**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.

**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. Discharge into the environment must be avoided.

Methods for cleaning up
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE

Handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Storage
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. Store in cool place. Moisture sensitive.

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>Update</th>
<th>Basis</th>
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<tr>
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<td>TWA</td>
<td>50 ppm</td>
<td>2007-01-01</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
<tr>
<td>Remarks</td>
<td></td>
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<tr>
<td></td>
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<td>Central Nervous System impairment Eye irritation Peripheral neuropathy Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Danger of cutaneous absorption</td>
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<td>TWA</td>
<td>50 ppm 180 mg/m3</td>
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<td></td>
<td></td>
<td>TWA</td>
<td>500 ppm 1,800 mg/m3</td>
<td>1997-08-04</td>
<td>USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants</td>
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<td>The value in mg/m3 is approximate.</td>
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<td></td>
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<tr>
<td>2-Methylpentane</td>
<td>107-83-5</td>
<td>TWA</td>
<td>500 ppm 1,800 mg/m3</td>
<td>1989-03-01</td>
<td>USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000</td>
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<td>STEL</td>
<td>1,000 ppm 3,600 mg/m3</td>
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<td>USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000</td>
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<td>USA. ACGIH Threshold</td>
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<td>Remarks</td>
<td>Limit Values (TLV)</td>
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</table>
### 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 ABEK (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.

**Eye protection**
Face shield and safety glasses

**Skin and body protection**
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

**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

**Safety data**
- pH: no data available
- Melting point: -95 °C (-139 °F)
- Boiling point: 68 - 70 °C (154 - 158 °F) at 1,013 hPa (760 mmHg)
- Flash point: -23 °C (-9 °F)
- Ignition temperature: no data available
- Lower explosion limit: 1.1 % (V)
- Upper explosion limit: 7.5 % (V)
- Density: 0.672 g/cm³
- Water solubility: no data available

### 10. STABILITY AND REACTIVITY
**Storage stability**
Stable under recommended storage conditions.

**Conditions to avoid**
Heat, flames and sparks.

**Materials to avoid**
Oxidizing agents, Strong oxidizing agents

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

**Hazardous reactions**
Vapours may form explosive mixture with air.

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**11. TOXICOLOGICAL INFORMATION**

**Acute toxicity**
no data available

**Irritation and corrosion**
no data available

**Sensitisation**
no data available

**Chronic exposure**

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.

**Signs and Symptoms of Exposure**

Prolonged or repeated contact with skin may cause:, defatting, Dermatitis, Contact with eyes can cause:, Redness, Blurred vision, Provokes tears., Effects due to ingestion may include:, Gastrointestinal discomfort, Central nervous system depression, Lung irritation, chest pain, pulmonary edema

**Potential Health Effects**

**Inhalation**
May be harmful if inhaled. Causes respiratory tract irritation. Vapours may cause drowsines and dizziness.

**Skin**
May be harmful if absorbed through skin. Causes skin irritation.

**Eyes**
Causes eye irritation.

**Ingestion**
Toxic if swallowed. Aspiration hazard if swallowed - can enter lungs and cause damage.

**Target Organs**
Peripheral nervous system., Kidney, Testes.,

---

**12. ECOLOGICAL INFORMATION**

**Elimination information (persistence and degradability)**
no data available
Ecotoxicity effects
no data available

Further information on ecology
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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. Observe all federal, state, and local environmental regulations. 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: 1208 Class: 3 Packing group: II
Proper shipping name: Hexanes
Reportable Quantity (RQ): 7692 lbs
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN-Number: 1208 Class: 3 Packing group: II EMS-No: F-E, S-D
Proper shipping name: HEXANES
Marine pollutant: No

IATA
UN-Number: 1208 Class: 3 Packing group: II
Proper shipping name: Hexanes

15. REGULATORY INFORMATION

OSHA Hazards
Flammable liquid, Target Organ Effect, Toxic by ingestion, Irritant, Reproductive hazard

DSL Status
This product contains the following components that are not on the Canadian DSL nor NDSL lists.

Hexanes, isomers CAS-No.

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
n-Hexane CAS-No. Revision Date
110-54-3 2007-07-01

SARA 311/312 Hazards
Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

n-Hexane CAS-No. Revision Date
110-54-3 2007-07-01
<table>
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<tr>
<th>Compound</th>
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**Pennsylvania Right To Know Components**

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**California Prop. 65 Components**

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

### 16. OTHER INFORMATION

**Further information**

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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 appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Co., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.