1-Hexene

SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

<table>
<thead>
<tr>
<th>Trade name</th>
<th>1-Hexene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synonyms</td>
<td>Hexene-1, Alpha-hexene, Hexylene, Hex-1-ene</td>
</tr>
<tr>
<td>Use</td>
<td>Industrial use, Raw material for chemical processes, Raw material for industry</td>
</tr>
<tr>
<td>Company</td>
<td>Sasol Chemicals (USA) LLC</td>
</tr>
<tr>
<td>(an affiliate of Sasol Chemicals North America LLC)</td>
<td></td>
</tr>
<tr>
<td>Address</td>
<td>12120 Wickchester Lane, Houston, TX 77079</td>
</tr>
<tr>
<td>Telephone</td>
<td>CHEMTREC North America Transportation Emergency (24-hr) (800) 424 9300</td>
</tr>
<tr>
<td></td>
<td>CHEMTREC World Wide</td>
</tr>
<tr>
<td></td>
<td>Other Emergencies (24-hr)</td>
</tr>
<tr>
<td></td>
<td>SDS and Product Information (8:00am-4:30pm CST) (281) 588 3491</td>
</tr>
<tr>
<td></td>
<td>Health and Safety Information (7:30am-4:00pm CST) (281) 588 3492</td>
</tr>
<tr>
<td>E-mail address</td>
<td><a href="mailto:SasolElectronicSDS@us.sasol.com">SasolElectronicSDS@us.sasol.com</a></td>
</tr>
</tbody>
</table>

SECTION 2 HAZARDS IDENTIFICATION

<table>
<thead>
<tr>
<th>OSHA/GHS Hazards</th>
<th>Flammable liquids Category 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aspiration hazard Category 1</td>
</tr>
</tbody>
</table>

LABEL ELEMENTS

Hazard symbols

Signal word Danger

Hazard statements H225 Highly flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

Precautionary statements

Prevention P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting equipment.
P242 Use only non-sparking tools.
SAFETY DATA SHEET

1-Hexene

P243  Take precautionary measures against static discharge.
P280  Wear protective gloves/ eye protection/ face protection.

Response
P303 + P361 + P353   IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P370 + P378   In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide for extinction.
P301 + P310  IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331   Do NOT induce vomiting.

Storage
P403 + P405 + P235   Store locked up in a well-ventilated place. Keep cool.

Disposal  P501  Dispose of contents/ container to an approved waste disposal plant.

SECTION 3  COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Hexene</td>
<td>592-41-6</td>
<td>100</td>
</tr>
</tbody>
</table>

See Section 8 for Exposure Guidelines and Section 15 for Regulatory Classifications.

SECTION 4  FIRST AID MEASURES

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

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.

Inhalation Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. In case of shortness of breath, give oxygen. Call a physician immediately.

Ingestion If swallowed, call a poison control centre or doctor immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

SECTION 5  FIREFIGHTING MEASURES

FLAMMABLE PROPERTIES

Fire/explosion  Explosion risk in case of fire. Catches fire spontaneously if exposed to air. Flash back possible over considerable distance. Vapours may form explosive mixture with air. NFPA Class 1B flammable liquid.

Suitable extinguishing media  Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemical.
1-Hexene

Protective equipment and precautions for firefighters
Wear self-contained breathing apparatus and protective suit.

Further information
Keep containers and surroundings cool with water spray. Do not allow run-off from fire fighting to enter drains or water courses. Do not use a solid water stream as it may scatter and spread fire.

SECTION 6  ACCIDENTAL RELEASE MEASURES

Methods and materials for containment and cleaning up
Evacuate personnel to safe areas. Remove all sources of ignition. 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).

SECTION 7  HANDLING AND STORAGE

Safe handling advice
Ensure all equipment is electrically grounded before beginning transfer operations.

Storage/Transport pressure
Ambient

Load/Unload temperature
Ambient

Further information on storage conditions
Keep away from heat and sources of ignition.

SECTION 8  EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING MEASURES
Provide adequate explosion-proof, general or exhaust ventilation. Ventilate low-lying areas such as sumps and confined spaces.

PERSONAL PROTECTIVE EQUIPMENT

Eyes
Chemical resistant goggles must be worn. Wear as appropriate:
Face-shield

Skin
Wear suitable protective clothing, gloves and eye/face protection.

Inhalation
Respiratory protection is normally not required except in emergencies or when conditions cause excessive airborne levels of mists or vapors. Use NIOSH approved respiratory protection.
SAFETY DATA SHEET

1-Hexene

EXPOSURE GUIDELINES

<table>
<thead>
<tr>
<th>Components</th>
<th>Exposure limit(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Hexene</td>
<td>ACGIH TLV (8-hour) 50 ppm</td>
</tr>
</tbody>
</table>

PEL= Permissible Exposure Limits  
TLV= Threshold Limit Value  
EL= Excursion Limit  
TWA= Time Weighted Average (8 hr.)  
STEL= Short Term Exposure Limit (15 min.)  
WEEL= Workplace Environmental Exposure Level

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance liquid
Colour Clear, colorless
Form liquid
Odour Hydrocarbons
Odour Threshold No data available

Flash point -26 °C, -15 °F;

Flammability Upper explosion limit: approximately 7 % (V)
Lower explosion limit: approximately 1.2 % (V)

Boiling point/boiling range 63 °C, 145 °F;

Melting point/range -140 °C, -220 °F;

Auto-ignition temperature 265 °C, 509 °F;

Decomposition temperature No data available

Flammability (solid, gas) No data available

Vapour pressure approximately 41.3 kPa @ 20 °C, 68 °F;

Vapour density 2.9

Density 0.67 g/cm³ @ 20 °C, 68 °F;

Relative density No data available
1-Hexene

**Water solubility**  insoluble

**Viscosity**  0.356 cSt

**pH**  No data available

**Evaporation rate**  No data available

**Partition coefficient: n-octanol/water**  No data available

### SECTION 10  STABILITY AND REACTIVITY

**Reactivity**  Stable at normal ambient temperature and pressure.

**Chemical stability**  No decomposition if stored and applied as directed.

**Conditions to avoid**  Keep away from heat and sources of ignition.

**Hazardous decomposition products**  Carbon dioxide (CO2)

**Materials to avoid**  Oxidizing agents. Acids.

**Hazardous polymerisation**  None.

### SECTION 11  TOXICOLOGICAL INFORMATION

**Acute dermal toxicity**  LD50 Rabbit: > 2,000 mg/kg
Test substance: Hexene-1

**Acute inhalation toxicity**  LC50 Rat (4 hours): 110.2 mg/l
Test substance: Hexene-1

**Acute oral toxicity**  LD50 Rat: > 5,600 mg/kg
Test substance: Hexene-1

**Skin corrosion/irritation**  Primary irritation (Rabbit): 0 (Max. score is 8.0.)
Test substance: Hexene-1
Not irritating

**Serious eye damage/eye irritation**  Primary irritation (Rabbit): 4 (Max. score is 110.)
Test substance: Hexene-1
Slight irritation
Respiratory or skin sensitisation
Guinea pig: not sensitizing; OECD Test Guideline 406

Germ cell mutagenicity
Genotoxicity in vitro:
No data available

Genotoxicity in vivo:
No data available

Assessment Mutagenicity:
No data available

Reproductive toxicity
Reproductive toxicity:
No data available

Assessment Reproductive toxicity:
No data available

Teratogenicity:
No data available

Assessment teratogenicity:
No data available

STOT - single exposure
No data available

STOT - repeated exposure
Rat; 28-day: NOAEL: 101 mg/kg
Test substance: Hexene-1
Indications of toxicity included clinical signs, decreased body weight, changes in clinical chemistry, and reduced spleen weight, and stomach irritation in males. Based on available data, the classification criteria are not met.

Aspiration toxicity
May be fatal if swallowed and enters airways.

Carcinogenicity
Assessment carcinogenicity:
Contains no ingredient listed as a carcinogen

SECTION 12 ECOLOGICAL INFORMATION

Toxicity to fish
LC50 (Oncorhynchus mykiss (rainbow trout)) 96 hours: 5.6 mg/l

Toxicity to aquatic invertebrates
EC50 (Daphnia magna (Water flea)) 48 hours: 4.4 mg/l

Toxicity to algae
ErC50 (Pseudokirchneriella subcapitata (green algae)) 96 hours: > 5.5 mg/l
**SAFETY DATA SHEET**

**1-Hexene**

<table>
<thead>
<tr>
<th>Chronic toxicity to fish</th>
<th>No data available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic toxicity to aquatic invertebrates</td>
<td>No data available</td>
</tr>
<tr>
<td>Biodegradation</td>
<td>Readily biodegradable. OECD Test Guideline 301C (28 d): &gt; 60 %</td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
<td>No data available</td>
</tr>
<tr>
<td>Mobility in soil</td>
<td>No data available</td>
</tr>
<tr>
<td>Other adverse effects</td>
<td>No data available</td>
</tr>
</tbody>
</table>

**SECTION 13 DISPOSAL CONSIDERATIONS**

**Waste Code**
D001 - Ignitability (RQ 100 LB). This product has the RCRA characteristic of ignitability. Re-evaluation of the product may be required by the user at the time of disposal, since the product uses, transformations, mixtures, contamination, and spillage may change the classification.

**Disposal methods**
Dispose of only in accordance with local, state, and federal regulations. Land disposal of this product is restricted. Do not contaminate any lakes, streams, ponds, groundwater or soil.

**Empty containers.**
Empty containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, triple-rinsed, properly bunged and promptly returned to a drum reconditioner, or properly disposed.

**SECTION 14 TRANSPORT INFORMATION**

**DOT**
UN 2370, 1-Hexene, 3, II

**IATA**
UN 2370, 1-Hexene, 3, II

**IMDG**
UN 2370, 1-Hexene, 3, II

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

**Remarks**
No data available
SECTION 15  REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA Inventory Listing

Components | CAS-No. | Weight percent
---|---|---
1-Hexene | 592-41-6 |

All chemical substances in this product are either on the TSCA Active Inventory, or in compliance with the inventory.

SARA 302 Status

Components | CAS-No. | Weight percent
---|---|---

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

SARA 311/312 Classification

Should this product meet EPCRA 311/312 Tier reporting criteria of 40 CFR 370, refer to Section 2 of this SDS for appropriate classification and Section 3 for components that meet the hazardous classification.

SARA 313 Chemical

Components | CAS-No. | Weight percent
---|---|---

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.

US. EPA CERCLA Hazardous Substances (40 CFR 302)

Components | Reportable Quantity | Weight percent
---|---|---
one | |

INTERNATIONAL REGULATIONS

WHMIS Classification

Flammable liquids | Category 2
Aspiration hazard | Category 1

European Union

Classification according to Regulation (EU) 1272/2008.

Flammable liquids, Category 2
Aspiration hazard, Category 1
Repeated exposure may cause skin dryness or cracking.

Australia. Inventory of Chemical Substances (AICS) | Listed
Japan. Inventory of Existing and New Chemical Substances (ENCS) | Listed
Japan. ISHL - Inventory of Chemical Substances | Listed
Canada. Domestic Substances List (DSL) Inventory | Listed
SAFETY DATA SHEET

1-Hexene

Canada. Non-Domestic Substance Listing (NDSL) Not listed
Philippines. Inventory of Chemicals / Chemical Substances (PICCS) Listed
Korea. Existing Chemicals Inventory (KECI) Listed
China. Inventory of Existing Chemical Substances (IECSC) Listed
Mexico. National Inventory of Chemical Substances (INSQ) Listed
New Zealand. Inventory of Chemical Substances (NZIoC) Listed
Switzerland. Inventory of Notified New Substances (CHINV) Listed
Taiwan. National Existing Chemical Inventory (NECI) Listed

Please note: The names and CAS numbers which are used for this product in the stated inventories may deviate from the information which is listed in Section 3.

STATE REGULATIONS

California Prop. 65

Components
Hexane

CAS-No. 110-54-3

Sasol Chemicals (USA) LLC hexene may contain detectable quantities of n-hexane which is a chemical on the California Proposition 65 list. The level is typically below 200 ppm, although it may vary. The manufacturing process is controlled to reduce the residual n-hexane content.

SECTION 16 OTHER INFORMATION

HAZARD RATINGS

<table>
<thead>
<tr>
<th></th>
<th>Health</th>
<th>Flammability</th>
<th>Physical Hazard/ Instability</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMIS®</td>
<td>1</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>NFPA</td>
<td>1</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

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1-Hexene

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