

Section 1. Product and Company Identification

**Product Name** 1-Hexene  
**CAS Number** 592-41-6

**Parchem - fine & specialty chemicals**  
**415 Huguenot Street**  
**New Rochelle, NY 10801**  
📞 (914) 654-6800 📠 (914) 654-6899  
🌐 [parchem.com](http://parchem.com) ✉ [info@parchem.com](mailto:info@parchem.com)

EMERGENCY RESPONSE NUMBER  
CHEMTEL  
Toll Free US & Canada: 1 (800) 255-3924  
All other Origins: 1 (813) 248-0585  
Collect Calls Accepted

Section 2. Hazards Identification

**Classification of the substance or mixture**

This product has been classified in accordance with the hazard communication standard 29 CFR 1910.1200; the SDS and labels contain all the information as required by the standard.

Flammable liquids , Category 2  
Aspiration hazard , Category 1

**GHS Label Elements**

**Pictograms:**



**Signal word:** DANGER

**Hazard and precautionary statements**

**Hazard Statements**

H225: Highly flammable liquid and vapor.  
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.  
P243 Take precautionary measures against static discharge.  
P280 Wear protective gloves/eye protection/ face protection.



### Response

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

### Storage

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

### Disposal

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

### Carcinogenicity

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

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

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

## Section 3. Composition / Information on Ingredients

**Common Name** 1-Hexene  
**Synonym(s)** Alpha-Hexene; Hexene-1; Hex-1-ene; Hexylene; Butyl Ethylene  
**Formula** C<sub>6</sub>H<sub>12</sub>  
**CAS Number** 592-41-6

COMPONENT	CAS NUMBER	CONCENTRATION
1-Hexene	592-41-6	99 - 100%

## Section 4. First Aid Measures

**General advice:** Move out of dangerous area. Show this material safety data sheet to the doctor in attendance. Symptoms of poisoning may appear several hours later. Do not leave the victim unattended.

**If inhaled:** If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

**In case of skin contact:** If on skin, rinse well with water. If on clothes, remove clothes.

**In case of eye contact:** Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

**If swallowed:** Keep respiratory tract clear. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.



#### Section 5. Firefighting Measures

**Flash point:** -26°C (-15°F)

Method: closed cup

**Auto ignition temperature:** 272°C (522°F)

**Suitable extinguishing media:** Alcohol-resistant foam. Carbon dioxide (CO<sub>2</sub>). Dry chemical.

**Unsuitable extinguishing media:** High volume water jet.

**Specific hazards during firefighting:** Do not allow run-off from firefighting to enter drains or water courses.

**Special protective equipment for fire-fighters:** Wear self-contained breathing apparatus for firefighting if necessary.

**Further information:** Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.

**Fire and explosion protection:** Do not spray on an open flame or any other incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.

**Hazardous decomposition products:** No data available.

#### Section 6. Accidental Release Measures

**Personal precautions:** Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

**Environmental precautions:** Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

**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).

#### Section 7. Handling and Storage

**Advice on Safe Handling:** Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary, but may not by themselves be sufficient. Review all operations, which have the potential to generating and accumulation of electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106 "Flammable and Combustible Liquids"; National Fire Protection Association (NFPA 77), "Recommended Practice on Static Electricity"; and/or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising Out of Static, Lightning, and stray Currents".



**Advice on protection against fire and explosion:** Do not spray on an open flame or any other incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.

### Storage

**Requirements for storage areas and containers:** No smoking. 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. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

## Section 8. Exposure Controls / Personal Protection

### Ingredients with workplace control parameters

#### US

Ingredients	Basis	Value	Control parameters	Note
1-Hexene	ACGIH	TWA	50 ppm	

**Engineering measures:** Adequate ventilation to control airborne concentrations and keep levels below the exposure guidelines/limits. Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

### Personal protective equipment

**Respiratory protection:** Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as: Air-Purifying Respirator for Organic Vapors. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.

**Hand protection:** The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

**Eye protection:** Eye wash bottle with pure water. Tightly fitting safety goggles.

**Skin and body protection:** Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Wear as appropriate: Flame retardant antistatic protective clothing. Workers should wear antistatic footwear.

**Hygiene measures:** When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

#### Section 9. Physical and Chemical Properties

##### Information on basic physical and chemical properties

###### Appearance

**Form:** Liquid

**Physical state:** Liquid

**Color:** Clear, colorless

###### Safety data

**Flash point:** -26°C (-15°F)

Method: closed cup

**Lower explosion limit:** 2% (V)

**Upper explosion limit:** 7% (V)

**Oxidizing properties:** no

**Auto ignition temperature:** 272°C (522°F)

**Thermal decomposition:** No data available

**Molecular weight:** 84.18 g/mol

**pH:** Not applicable

**pour point:** No data available

**Boiling point/boiling range:** 63.5°C (146.3°F)

###### Vapor pressure

176.00 MMHG at 24°C (75°F)

106.30 kPa at 65°C (149°F)

**Relative density:** 0.68, 15°C (59°F)

###### Density

645 kg/m<sup>3</sup> at 50°C (122°F)

678 kg/m<sup>3</sup> at 15°C (59°F)

674 g/cm<sup>3</sup> at 20°C (68°F)

###### Water solubility

47 MG/L at 20°C (68°F)

slightly soluble

**Partition coefficient: n-octanol/water:** log Pow: 3.87

**Viscosity, kinematic:** 0.34 cStat 40°C (104°F)

**Relative vapor density:** 2.9 (Air = 1.0)

**Evaporation rate:** No data available

**Percent volatile:** > 99%

**Other information**

**Conductivity:** 4.1 pSm  
Method: ASTM D4308

Section 10. Stability and Reactivity

**Chemical stability:** This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Possibility of hazardous reactions**

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

**Thermal decomposition:** No data available

**Hazardous decomposition products:** No data available

**Other data:** No decomposition if stored and applied as directed.

Section 11. Toxicological Information

**Acute oral toxicity**

LD50: > 5,600 mg/kg

Species: rat

Sex: male and female

Method: Fixed Dose Method

**Acute inhalation toxicity**

LC50: 110.1 mg/l

Exposure time: 4 h

Species: rat

Sex: male

Test atmosphere: vapor

Method: OECD Test Guideline 403

**Skin irritation:** No skin irritation

Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin resulting in desiccation of the skin.

**Eye irritation:** No eye irritation

**Animal Sensitization:** Did not cause sensitization on laboratory animals.

**Repeated dose toxicity**

Species: rat, male

Sex: male

Application Route: oral gavage

Dose: 0, 10, 101, 1010, 3365 mg/kg

Exposure time: 28 day  
Number of exposures: daily  
NOEL: 101 mg/kg  
Lowest observable effect level: 1,010 mg/kg  
Test substance: yes  
Method: OECD Test Guideline 407

Species: rat, female  
Sex: female  
Application Route: oral gavage  
Dose: 0, 10, 101, 1010, 3365 mg/kg  
Exposure time: 28 day  
Number of exposures: daily  
NOEL: 1,010 mg/kg  
Lowest observable effect level: 3,365 mg/kg  
Test substance: yes  
Method: OECD Test Guideline 407

Species: rat  
Application Route: Inhalation  
Dose: 0, 300, 1000, 3000 ppm  
Exposure time: 90 day  
Number of exposures: 6 h/d, 5 d/wk, 13 wk  
NOEL: 3000 ppm  
Test substance: yes

### Reproductive toxicity

Species: rat  
Sex: males  
Application Route: oral gavage  
Dose: 0, 100, 500, 1000 mg/kg  
Number of exposures: daily  
Test period: 44 d  
Test substance: yes  
Method: OECD Guideline 421  
NOAEL Parent: 1,000 mg/kg  
NOAEL F1: 1,000 mg/kg

Species: rat  
Sex: females  
Application Route: oral gavage  
Dose: 0, 100, 500, 1000 mg/kg  
Number of exposures: daily  
Test period: 41-51 d  
Test substance: yes

Method: OECD Guideline 421  
NOAEL Parent: 1,000 mg/kg  
NOAEL F1: 1,000 mg/kg

**Aspiration toxicity:** May be fatal if swallowed and enters airways. Substances known to cause human aspiration toxicity hazards or to be regarded as if they cause human aspiration toxicity hazard.

#### **CMR effects**

Carcinogenicity: Not available

Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Teratogenicity: Animal testing did not show any effects on fetal development.

Reproductive toxicity: Animal testing did not show any effects on fertility.

**Further information:** Solvents may degrease the skin.

#### Section 12. Ecological Information

##### **Toxicity to fish**

LC50: 5.6 mg/l

Exposure time: 96 h

Species: *Oncorhynchus mykiss* (rainbow trout)

semi-static test Test substance: yes

Method: OECD Test Guideline 203

##### **Toxicity to daphnia and other aquatic invertebrates**

EC50: 4.4 mg/l

Exposure time: 48 h

Species: *Daphnia magna* (Water flea)

static test Test substance: no

Method: OECD Test Guideline 202

Information given is based on data obtained from similar substances.

##### **Toxicity to algae**

NOEC: 1.8 mg/l

Exposure time: 96 h

Species: *Pseudokirchneriella subcapitata* (green algae)

Growth inhibition Method: OECD Test Guideline 201

Information given is based on data obtained from similar substances.

EC50: > 5.5 mg/l

Exposure time: 96 h

Species: *Pseudokirchneriella subcapitata* (green algae)

Growth inhibition Method: OECD Test Guideline 201

Information given is based on data obtained from similar substances.





**Bioaccumulation:** This material is not expected to bioaccumulate.

**Biodegradability**

67 - 98%

Testing period: 28 d

Test substance: yes

According to the results of tests of biodegradability this product is considered as being readily biodegradable.

**Ecotoxicology Assessment**

**Acute aquatic toxicity:** Toxic to aquatic life.

**Chronic aquatic toxicity:** No data available

**Toxicity Data on Soil:** No data available

**Other organisms relevant to the environment:** No data available

**Impact on Sewage Treatment:** No data available

**Results of PBT assessment:** Non-classified PBT substance, Non-classified vPvB substance

**Additional ecological information:** Toxic to aquatic life. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13. Disposal Considerations

**Waste Treatment Methods:** Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

**The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).**

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the bill of lading.

**US DOT (United States Department Of Transportation)**

UN2370, 1-Hexene, 3, II

**IMO/IMDG (International Maritime Dangerous Goods)**

UN2370, 1-Hexene, 3, II, (-26°C)

**IATA (International Air Transport Association)**

UN2370, 1-Hexene, 3, II

**ADR (Agreement On Dangerous Goods By Road (Europe))**

UN2370, 1-Hexene, 3, II, (E/E)



**RID (Regulations Concerning The International Transport Of Dangerous Goods (Europe))**

UN2370, 1-Hexene, 3, II

**ADN (European Agreement Concerning The International Carriage Of Dangerous Goods By Inland Waterways)**

UN2370, 1-Hexene, 3, II

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

Section 15. Regulatory Information

**National legislation**

**SARA 311/312 Hazards:** Fire Hazard

**EPCRA - EMERGENCY PLANNING COMMUNITY RIGHT - TO - KNOW**

**CERCLA Reportable Quantity:** This material does not contain any components with a CERCLA RQ.

**SARA 302 Reportable Quantity:** This material does not contain any components with a SARA 302 RQ.

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

**SARA 304 Reportable Quantity:** This material does not contain any components with a section 304 EHS RQ.

**SARA 313 Ingredients:** 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.

**Clean Air Act**

**Ozone-Depletion Potential:** This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

**US State Regulations**

**Pennsylvania Right To Know**

1-Hexene - 592-41-6

2-Ethyl-1-Butene - 760-21-4

**New Jersey Right To Know**

1-Hexene - 592-41-6

2-Ethyl-1-Butene - 760-21-4



**California Prop. 65 Ingredients:** This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

**Notification status**

<b>Europe REACH:</b>	On the inventory, or in compliance with the inventory
<b>United States of America TSCA:</b>	On the inventory, or in compliance with the inventory
<b>Canada DSL:</b>	All components of this product are on the Canadian DSL.
<b>Australia AICS:</b>	On the inventory, or in compliance with the inventory
<b>New Zealand NZIoC:</b>	On the inventory, or in compliance with the inventory
<b>Japan ENCS:</b>	On the inventory, or in compliance with the inventory
<b>Korea KECl:</b>	On the inventory, or in compliance with the inventory
<b>Philippines PICCS:</b>	On the inventory, or in compliance with the inventory
<b>China IECSC:</b>	On the inventory, or in compliance with the inventory

Section 16. Other Information

**Disclaimer:** 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.

REVISION DATE: 6/30/2015

