

## SAFETY DATA SHEET

Creation Date 25-Oct-2010

Revision Date 14-Feb-2020

Revision Number 2

### 1. Identification

**Product Name** 1-Octene

**Cat No. :** A11146

**CAS-No** 111-66-0  
**Synonyms** Caprylene

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.  
**Details of the supplier of the safety data sheet**

**Company**

Alfa Aesar  
Thermo Fisher Scientific Chemicals, Inc.  
30 Bond Street  
Ward Hill, MA 01835-8099  
Tel: 800-343-0660  
Fax: 800-322-4757  
**Email:** tech@alfa.com  
www.alfa.com

**Emergency Telephone Number**

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660.  
After normal business hours, call Carechem 24 at (866) 928-0789.

### 2. Hazard(s) identification

**Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids	Category 2
Aspiration Toxicity	Category 1

**Label Elements**

**Signal Word**

Danger

**Hazard Statements**

Highly flammable liquid and vapor  
May be fatal if swallowed and enters airways

**Precautionary Statements****Prevention**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
Keep container tightly closed  
Ground/bond container and receiving equipment  
Use explosion-proof electrical/ventilating/lighting/equipment  
Use only non-sparking tools  
Take precautionary measures against static discharge  
Wear protective gloves/protective clothing/eye protection/face protection

**Skin**

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

**Ingestion**

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
Do NOT induce vomiting

**Fire**

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction

**Storage**

Store locked up  
Store in a well-ventilated place. Keep cool

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Very toxic to aquatic life with long lasting effects  
Repeated exposure may cause skin dryness or cracking

### 3. Composition/Information on Ingredients

Component	CAS-No	Weight %
1-Octene	111-66-0	>95

### 4. First-aid measures

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention.
<b>Inhalation</b>	Remove from exposure, lie down. Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention. Risk of serious damage to the lungs (by aspiration).
<b>Ingestion</b>	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Drink plenty of water. Get medical attention. If possible drink milk afterwards. Call a physician or poison control center immediately. If vomiting occurs naturally, have victim lean forward.
<b>Most important symptoms and effects</b>	Difficulty in breathing. . Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting
<b>Notes to Physician</b>	Treat symptomatically

## 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Water spray. Carbon dioxide (CO <sub>2</sub> ). Dry chemical. Water mist may be used to cool closed containers. Chemical foam. Water mist may be used to cool closed containers.
<b>Unsuitable Extinguishing Media</b>	No information available
<b>Flash Point</b>	13 °C / 55.4 °F
<b>Method -</b>	No information available
<b>Autoignition Temperature</b>	230 °C / 446 °F
<b>Explosion Limits</b>	
<b>Upper</b>	3.90%
<b>Lower</b>	0.70%
<b>Sensitivity to Mechanical Impact</b>	No information available
<b>Sensitivity to Static Discharge</b>	No information available

### Specific Hazards Arising from the Chemical

Flammable. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Vapors may form explosive mixtures with air. Do not allow run-off from fire-fighting to enter drains or water courses.

### Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### NFPA

**Health**  
1

**Flammability**  
3

**Instability**  
0

**Physical hazards**  
N/A

## 6. Accidental release measures

<b>Personal Precautions</b>	Remove all sources of ignition. Take precautionary measures against static discharges.
<b>Environmental Precautions</b>	Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. See Section 12 for additional Ecological Information. Avoid release to the environment. Collect spillage.
<b>Methods for Containment and Clean Up</b>	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Do not let this chemical enter the environment.

## 7. Handling and storage

<b>Handling</b>	Avoid contact with skin and eyes. Do not breathe mist/vapors/spray. Take precautionary measures against static discharges. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Handle product only in closed system or provide appropriate exhaust ventilation. Wash thoroughly after handling. Use spark-proof tools and explosion-proof equipment. Use only non-sparking tools. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Contents may develop pressure upon prolonged storage. Keep away from open flames, hot surfaces and sources of ignition.
<b>Storage</b>	Keep in a dry, cool and well-ventilated place. Refer product specification and/or product

label for specific storage temperature requirement. Keep container tightly closed. Keep away from heat, sparks and flame. Flammables area.

## 8. Exposure controls / personal protection

### Exposure Guidelines

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

### Engineering Measures

Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

### Personal Protective Equipment

#### **Eye/face Protection**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

#### **Skin and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure.

#### **Respiratory Protection**

No protective equipment is needed under normal use conditions.

#### **Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

Physical State	Liquid
Appearance	No information available
Odor	Petroleum distillates
Odor Threshold	No information available
pH	No information available
Melting Point/Range	-102 °C / -151.6 °F
Boiling Point/Range	121 - 123 °C / 249.8 - 253.4 °F @ 760 mmHg
Flash Point	13 °C / 55.4 °F
Evaporation Rate	No information available
Flammability (solid,gas)	Not applicable
Flammability or explosive limits	
Upper	3.90%
Lower	0.70%
Vapor Pressure	13 mmHg @ 20 °C
Vapor Density	3.9
Specific Gravity	0.715
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	230 °C / 446 °F
Decomposition Temperature	No information available
Viscosity	0.38 cSt at 40 °C
Molecular Formula	C8 H16
Molecular Weight	112.21

## 10. Stability and reactivity

### **Reactive Hazard**

None known, based on information available

### **Stability**

Stable under normal conditions.

### **Conditions to Avoid**

Keep away from open flames, hot surfaces and sources of ignition. Incompatible products.

**Incompatible Materials** Strong oxidizing agents, Strong acids, Peroxides

**Hazardous Decomposition Products** Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

**Hazardous Polymerization** Hazardous polymerization does not occur.

**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

### Acute Toxicity

#### Product Information Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
1-Octene	>10000 mg/kg (Rat)	>2000 mg/kg (Rabbit)	40.2 mg/L/4h (Rat)

**Toxicologically Synergistic Products** No information available

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Irritation** No information available

**Sensitization** No information available

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
1-Octene	111-66-0	Not listed	Not listed	Not listed	Not listed	Not listed

**Mutagenic Effects** Not mutagenic in AMES Test

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** None known

**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

## 12. Ecological information

### Ecotoxicity

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Persistence and Degradability** No information available

**Bioaccumulation/ Accumulation** No information available.

**Mobility** No information available.

Component	log Pow
1-Octene	4.57

### 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### 14. Transport information

#### DOT

**UN-No** UN3295  
**Proper Shipping Name** Hydrocarbons, liquid, n.o.s.  
**Hazard Class** 3  
**Packing Group** II

#### TDG

**UN-No** UN3295  
**Proper Shipping Name** Hydrocarbons, liquid, n.o.s.  
**Hazard Class** 3  
**Packing Group** II

#### IATA

**UN-No** UN3295  
**Proper Shipping Name** Hydrocarbons, liquid, n.o.s.  
**Hazard Class** 3  
**Packing Group** II

#### IMDG/IMO

**UN-No** UN3295  
**Proper Shipping Name** Hydrocarbons, liquid, n.o.s.  
**Hazard Class** 3  
**Packing Group** II

### 15. Regulatory information

#### United States of America Inventory

Component	CAS-No	TSCA	TSCA Inventory notification - Active/Inactive	TSCA - EPA Regulatory Flags
1-Octene	111-66-0	X	ACTIVE	-

#### **Legend:**

**TSCA** - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

**TSCA 12(b)** - Notices of Export Not applicable

#### International Inventories

Canada (DSL/NDL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

Component	CAS-No	DSL	NDL	EINECS	PICCS	ENCS	AICS	IECSC	KECL
1-Octene	111-66-0	X	-	203-893-7	X	X	X	X	KE-26673

#### U.S. Federal Regulations

**SARA 313** Not applicable

**SARA 311/312 Hazard Categories** See section 2 for more information

**CWA (Clean Water Act)** Not applicable

**Clean Air Act** Not applicable

**OSHA - Occupational Safety and** Not applicable

Health Administration

**CERCLA** Not applicable**California Proposition 65** This product does not contain any Proposition 65 chemicals.**U.S. State Right-to-Know Regulations**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
1-Octene	X	-	X	-	-

**U.S. Department of Transportation**

Reportable Quantity (RQ): N  
DOT Marine Pollutant N  
DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security** This product does not contain any DHS chemicals.**Other International Regulations****Mexico - Grade** No information available**16. Other information**

**Prepared By** Health, Safety and Environmental Department  
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www.alfa.com

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**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**