



# 1-OCTENE

## Safety Data Sheet ENE03280

Date of issue: 08/29/2016

Version: 1.0

### SECTION 1: Identification

#### 1.1. Identification

Product name : 1-OCTENE  
 Product code : ENE03280  
 Product form : Substance  
 Physical state : Liquid  
 Formula : C<sub>8</sub>H<sub>16</sub>  
 Synonyms : n-OCTENE  
 CAPRYLENE  
 Chemical family : HYDROCARBON

#### 1.2. Recommended use and restrictions on use

Recommended use : Chemical intermediate

#### 1.3. Supplier

##### GELEST, INC.

11 East Steel Road  
 Morrisville, PA 19067

##### USA

T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST

[info@gelest.com](mailto:info@gelest.com) - [www.gelest.com](http://www.gelest.com)

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Flammable liquids Category 2

Hazardous to the aquatic environment - Acute Hazard Category 1

H225 Highly flammable liquid and vapor

H400 Very toxic to aquatic life

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

H225 - Highly flammable liquid and vapor  
 H400 - Very toxic to aquatic life

Precautionary statements (GHS US) :

P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
 P210 - Keep away from heat, open flames, sparks. - No smoking.  
 P233 - Keep container tightly closed.  
 P240 - Ground/Bond container and receiving equipment  
 P241 - Use explosion-proof electrical equipment  
 P242 - Use only non-sparking tools.  
 P243 - Take precautionary measures against static discharge.  
 P273 - Avoid release to the environment.  
 P303+P361+P353 - If on skin (or hair): take off immediately all contaminated clothing. rinse skin with water/shower  
 P370+P378 - In case of fire: Use water spray or fog, foam, carbon dioxide, dry chemical to extinguish.  
 P391 - Collect spillage.  
 P403+P235 - Keep in a cool place  
 P501 - Dispose of contents/container to licensed waste disposal facility.

#### 2.3. Hazards not otherwise classified (HNOC)

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

# 1-OCTENE

## Safety Data Sheet

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Substance type : Multi-constituent  
Name : 1-OCTENE  
CAS-No. : 111-66-0

Name	Product identifier	%	GHS-US classification
1-Octene	(CAS-No.) 111-66-0	95 - 100	Flam. Liq. 2, H225 Aquatic Acute 1, H400
2-Ethylhexene	(CAS-No.) 1632-16-2	0 - 3	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2B, H320

Full text of hazard classes and H-statements : see section 16

#### 3.2. Mixtures

Not applicable

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

First-aid measures general : Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact : Wash with plenty of soap and water. Get medical advice/attention.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Get medical advice/attention.

#### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : May cause irritation to the respiratory tract.

Symptoms/effects after skin contact : May cause mild skin irritation.

Symptoms/effects after eye contact : May cause eye irritation.

Symptoms/effects after ingestion : May be harmful if swallowed.

#### 4.3. Immediate medical attention and special treatment, if necessary

No additional information available

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Water fog. Foam. Carbon dioxide. Dry chemical.

Unsuitable extinguishing media : None known.

#### 5.2. Specific hazards arising from the chemical

Fire hazard : Highly flammable liquid and vapor. Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

Explosion hazard : May form flammable/explosive vapor-air mixture.

#### 5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Avoid all eye and skin contact and do not breathe vapor and mist.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Eliminate every possible source of ignition. Use special care to avoid static electric charges.

##### 6.1.1. For non-emergency personnel

Protective equipment : Wear protective equipment as described in Section 8.

Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

# 1-OCTENE

## Safety Data Sheet

### 6.3. Methods and material for containment and cleaning up

- For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
- Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it. Collect spillage. Use only non-sparking tools.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapors are flammable. Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- Precautions for safe handling : Avoid all eye and skin contact and do not breathe vapor and mist. Ground/bond container and receiving equipment. Provide good ventilation in process area to prevent accumulation of vapors. Take precautionary measures against static discharge. Use only non-sparking tools.
- Hygiene measures : Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical equipment.
- Storage conditions : Keep container tightly closed. Keep in a cool place.
- Incompatible materials : Oxidizing agent.
- Storage area : Store in a well-ventilated place. Store away from heat.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

1-Octene (111-66-0)		
AIHA	WEEL TWA (ppm)	75 ppm

### 8.2. Appropriate engineering controls

- Appropriate engineering controls : Provide local exhaust or general room ventilation.

### 8.3. Individual protection measures/Personal protective equipment

#### Personal protective equipment:

Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

#### Hand protection:

Neoprene or nitrile rubber gloves

#### Eye protection:

Chemical goggles. Contact lenses should not be worn

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified organic vapor (black cartridge) respirator.

## SECTION 9: Physical and chemical properties

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

- Physical state : Liquid
- Appearance : Clear liquid.
- Molecular mass : 112.21 g/mol
- Color : No data available
- Odor : strong.
- Odor threshold : No data available
- Refractive index : 1.409
- pH : No data available

# 1-OCTENE

## Safety Data Sheet

Relative evaporation rate (butyl acetate=1)	: ~ 1
Melting point	: < -102 °C
Freezing point	: No data available
Boiling point	: 121 - 122 °C
Flash point	: 21 °C
Auto-ignition temperature	: 221 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Highly flammable liquid and vapor
Vapor pressure	: 13 mm Hg @ 20°C
Relative vapor density at 20 °C	: 3.9
Relative density	: 0.714
% Volatiles	: 100 %
Solubility	: Insoluble in water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion limits	: 0.7 - 6.8 vol % (lower; upper)

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Heat. Open flame. Sparks.

### 10.5. Incompatible materials

Oxidizing agent.

### 10.6. Hazardous decomposition products

Organic acid vapors.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

1-Octene (111-66-0)	
LD50 oral rat	> 5000 mg/kg ; >10,000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (ppm)	8050 ppm/4h
ATE US (gases)	8050 ppmV/4h
ATE US (vapors)	40.2 mg/l/4h

2-Ethylhexene (1632-16-2)	
LD50 intraperitoneal mouse	100 mg/kg
LC50 inhalation rat (ppm)	4000 ppm/4h
ATE US (gases)	4000 ppmV/4h

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
	Ames test (histidine reversion) is negative, i.e not a mutagen
Carcinogenicity	: Not classified

# 1-OCTENE

## Safety Data Sheet

Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
Symptoms/effects after inhalation	: May cause irritation to the respiratory tract.
Symptoms/effects after skin contact	: May cause mild skin irritation.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: May be harmful if swallowed.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : Very toxic to aquatic life.

##### 1-Octene (111-66-0)

LC50 fish 1	1 mg/l
-------------	--------

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

##### 1-Octene (111-66-0)

Log Pow	4.57 (at 25 °C)
---------	-----------------

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

Effect on the ozone layer : No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

Sewage disposal recommendations	: Do not dispose of waste into sewer.
Product/Packaging disposal recommendations	: Incinerate. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.
Additional information	: Handle empty containers with care because residual vapors are flammable.
Ecology - waste materials	: Avoid release to the environment.

### SECTION 14: Transport information

#### 14.1. UN number

UN-No.(DOT)	: 3295
DOT NA no.	UN3295

#### 14.2. UN proper shipping name

Transport document description	: UN3295 Hydrocarbons, liquid, n.o.s. (1-OCTENE), 3, II
Proper Shipping Name (DOT)	: Hydrocarbons, liquid, n.o.s. (1-OCTENE)
Class (DOT)	: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Packing group (DOT)	: II - Medium Danger
Hazard labels (DOT)	: 3 - Flammable liquid



Dangerous for the environment	Yes
Marine pollutant	: Yes



# 1-OCTENE

## Safety Data Sheet

DOT Packaging Non Bulk (49 CFR 173.xxx) : 202  
DOT Packaging Bulk (49 CFR 173.xxx) : 242  
DOT Packaging Exceptions (49 CFR 173.xxx) : 150

### 14.3. Additional information

Emergency Response Guide (ERG) Number : 128  
Other information : No supplementary information available.

### Transport by sea

DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

### Air transport

DOT Quantity Limitations Passenger aircraft/rail : 5 L  
(49 CFR 173.27)  
DOT Quantity Limitations Cargo aircraft only (49 : 60 L  
CFR 175.75)

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### 1-Octene (111-66-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### 2-Ethylhexene (1632-16-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. International regulations

#### CANADA

#### 1-Octene (111-66-0)

Listed on the Canadian DSL (Domestic Substances List)

#### 2-Ethylhexene (1632-16-2)

Listed on the Canadian DSL (Domestic Substances List)

### EU-Regulations

#### 1-Octene (111-66-0)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### 2-Ethylhexene (1632-16-2)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

### National regulations

#### 1-Octene (111-66-0)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on CICR (Turkish Inventory and Control of Chemicals)

#### 2-Ethylhexene (1632-16-2)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on KECI (Korean Existing Chemicals Inventory)

### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

#### 1-Octene (111-66-0)

U.S. - Massachusetts - Right To Know List  
U.S. - Pennsylvania - RTK (Right to Know) List

# 1-OCTENE

## Safety Data Sheet

### SECTION 16: Other information

Full text of H-phrases::

H225	Highly flammable liquid and vapor
H315	Causes skin irritation
H320	Causes eye irritation
H400	Very toxic to aquatic life

Abbreviations and acronyms

: Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor.

### Hazard Rating

Health

: 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability

: 3 Serious Hazard - Materials capable of ignition under almost all normal temperature conditions. Includes flammable liquids with flash points below 73 F and boiling points above 100 F. as well as liquids with flash points between 73 F and 100 F. (Classes IB & IC)

Physical

: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Prepared by safety and environmental affairs.

Date of issue: 08/29/2016

Version: 1.0

SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

*The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore. Information on this safety data sheet is not intended to constitute a basis for product specifications.*

© 2019 Gelest Inc. Morrisville, PA 19067