

MATERIAL SAFETY DATA SHEET

Date Printed: 04/28/2008

Date Updated: 08/10/2007

Version 1.7

Section 1 - Product and Company Information

Product Name 1-OCTENE, STANDARD FOR GC
Product Number 74900
Brand FLUKA

Company Sigma-Aldrich
Address 3050 Spruce Street
SAINT LOUIS MO 63103 US

Technical Phone: 800-325-5832
Fax: 800-325-5052
Emergency Phone: 314-776-6555

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
1-OCTENE	111-66-0	No

Ingredient Name	CAS #	Percent	SARA 313
1-OCTENE	111-66-0	97	No
2-ETHYL-1-HEXENE	1632-16-2	2.2	No

Formula C₈H₁₆

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Dangerous for the environment.

Flammable. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

HMIS RATING

HEALTH: 1

FLAMMABILITY: 3

REACTIVITY: 0

NFPA RATING

HEALTH: 1

FLAMMABILITY: 3

REACTIVITY: 0

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

DERMAL EXPOSURE

In case of contact, immediately wash skin with soap and copious amounts of water.

EYE EXPOSURE

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

INFORMATION FOR PHYSICIAN

Contamination of the eyes should be treated by immediate and prolonged irrigation with copious amounts of water.

Section 5 - Fire Fighting Measures

FLAMMABLE HAZARDS

Flammable Hazards: Yes

EXPLOSION HAZARDS

Vapor may travel considerable distance to source of ignition and flash back. Container explosion may occur under fire conditions.

FLASH POINT

70 °F 21 °C Method: closed cup

EXPLOSION LIMITS

Lower: 0.7 % Upper: 3.9 %

AUTOIGNITION TEMP

230 °C

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: 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.

FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s): Flammable liquid. Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area. Shut off all sources of ignition. Use nonsparking tools.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Cover with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING

User Exposure: Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE

Suitable: Keep tightly closed. Keep away from heat, sparks, and open flame.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS

Safety shower and eye bath. Use nonsparking tools. Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). 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.
Hand: Compatible chemical-resistant gloves.
Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES

Remove and wash contaminated clothing promptly. Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance	Physical State: Clear liquid Color: Colorless	
Property	Value	At Temperature or Pressure
Molecular Weight	112.22 AMU	
pH	N/A	
BP/BP Range	121.0 - 122.0 °C	
MP/MP Range	- 101.0 °C	
Freezing Point	N/A	
Vapor Pressure	34 mmHg	38 °C
Vapor Density	3.9 g/l	
Saturated Vapor Conc.	N/A	
SG/Density	0.715 g/cm ³	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	100 %	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	0.27 Pas	
Surface Tension	N/A	
Partition Coefficient	Log Kow: 4.57	
Decomposition Temp.	N/A	
Flash Point	70 °F 21 °C	Method: closed cup
Explosion Limits	Lower: 0.7 % Upper: 3.9 %	

Flammability	N/A
Autoignition Temp	230 °C
Refractive Index	1.408
Optical Rotation	N/A
Miscellaneous Data	N/A
Solubility	Solubility in Water: Insoluble. Other Solvents: HYDROCARBON SOLVENTS-SOLUBLE

N/A = not available

Section 10 - Stability and Reactivity

STABILITY

Stable: Stable.

Materials to Avoid: Acids, Oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: May cause eye irritation.

Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.

Ingestion: May be harmful if swallowed.

SENSITIZATION

Sensitization: Will not occur

SIGNS AND SYMPTOMS OF EXPOSURE

Headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness. Exposure can cause: Prolonged or repeated contact with skin can cause defatting and dermatitis. Contact with eyes can cause redness, tearing, and blurred vision. Ingestion may cause gastrointestinal irritation. Aspiration or inhalation may cause chemical pneumonitis.

TOXICITY DATA

Oral

Rat

> 10,000 mg/kg

LD50

4 HR

Inhalation

Rat

8,050 ppm

LC50

Skin

Rabbit

> 10,000 mg/kg

LD50

Section 12 - Ecological Information

ACCUMULATION

Bioaccumulation Potential: Indication of bioaccumulation.

ACUTE ECOTOXICITY TESTS

Test Type: EC50 Daphnia
Species: Daphnia magna
Time: 48 h
Value: > 3.2 - < 10.0 mg/l

Test Type: LC50 Fish
Species: Brachydanio rerio
Time: 96 h
Value: 4.8 mg/l

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. 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.

Section 14 - Transport Information

DOT

Proper Shipping Name: Hydrocarbons, liquid, n.o.s.
UN#: 3295
Class: 3
Packing Group: Packing Group II
Hazard Label: Flammable liquid
PIH: Not PIH

IATA

Proper Shipping Name: Hydrocarbons, liquid, n.o.s.
IATA UN Number: 3295
Hazard Class: 3
Packing Group: II

Section 15 - Regulatory Information

EU ADDITIONAL CLASSIFICATION

Symbol of Danger: N
Indication of Danger: Dangerous for the environment.
R: 10-51/53
Risk Statements: Flammable. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S: 61
Safety Statements: Avoid release to the environment. Refer to special instructions/safety data sheets.

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Dangerous for the environment.
Risk Statements: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Flammable.
Safety Statements: Avoid release to the environment. Refer to special instructions/safety data sheets.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

Section 16 - Other Information

DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

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 Inc., 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. Copyright 2008 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.