SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : 1-Octadecene
Product Number : 74738
Brand : Sigma-Aldrich
CAS-No. : 112-88-9

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich Inc.
3050 SPRUCE ST
ST. LOUIS MO 63103
UNITED STATES
Telephone : +1 314 771-5765
Fax : +1 800 325-5052

1.4 Emergency telephone

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Aspiration hazard (Category 1), H304

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal Word : Danger
Hazard statement(s) : May be fatal if swallowed and enters airways.
Precautionary statement(s) : IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
2.3 Hazards not otherwise classified (HNOC) or not covered by GHS
Repeated exposure may cause skin dryness or cracking.

SECTION 3: Composition/information on ingredients

3.1 Substances

Formula: \( C_{18}H_{36} \)
Molecular weight: 252.48 g/mol
CAS-No.: 112-88-9
EC-No.: 204-012-9

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-octadecen</td>
<td>Asp. Tox. 1; H304</td>
<td>&lt;= 100 %</td>
</tr>
</tbody>
</table>

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice
Consult a physician. Show this material safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available
SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
No data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions
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.

Storage class
Storage class (TRGS 510): 10: Combustible liquids

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated
SECTION 8: Exposure controls/personal protection

8.1 Control parameters

**Ingredients with workplace control parameters**
Contains no substances with occupational exposure limit values.

8.2 Exposure controls

**Appropriate engineering controls**
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Personal protective equipment**

**Eye/face protection**
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection**
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.4 mm
Break through time: 480 min
Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 30 min
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

**Body Protection**
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**
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. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance
   Form: liquid, clear
   Color: colorless

b) Odor
   No data available

c) Odor Threshold
   No data available

d) pH
   No data available

e) Melting point/freezing point
   Melting point/range: 14 - 16 °C (57 - 61 °F)

f) Initial boiling point and boiling range
   309.4 - 319.4 °C 588.9 - 606.9 °F at 1,013 hPa

g) Flash point
   149.00 °C (300.20 °F) - closed cup

h) Evaporation rate
   No data available

i) Flammability (solid, gas)
   No data available

j) Upper/lower flammability or explosive limits
   No data available

k) Vapor pressure
   1.3 hPa at 20 °C (68 °F)

l) Vapor density
   No data available

m) Density
   0.789 g/mL at 25 °C (77 °F)
   Relative density
   No data available

n) Water solubility
   practically insoluble

o) Partition coefficient: n-octanol/water
   log Pow: > 8 at 20 °C (68 °F)

p) Autoignition temperature
   No data available

q) Decomposition temperature
   No data available

r) Viscosity
   3.6 mm2/s at 40 °C (104 °F)

s) Explosive properties
   No data available

t) Oxidizing properties
   No data available

9.2 Other safety information
No data available
SECTION 10: Stability and reactivity

10.1 Reactivity
   No data available

10.2 Chemical stability
   Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
   No data available

10.4 Conditions to avoid
   No data available

10.5 Incompatible materials
   Strong oxidizing agents

10.6 Hazardous decomposition products
   In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

   Acute toxicity
   LD50 Oral - Rat - female - > 2,000 mg/kg
   (OECD Test Guideline 420)
   Inhalation: No data available
   LD50 Dermal - Rat - male and female - > 2,000 mg/kg
   (OECD Test Guideline 402)

   Skin corrosion/irritation
   Skin - Rabbit
   Result: Mild skin irritation - 4 h
   (OECD Test Guideline 404)

   Serious eye damage/eye irritation
   Eyes - Rabbit
   Result: No eye irritation
   (OECD Test Guideline 405)

   Respiratory or skin sensitization
   Maximization Test - Guinea pig
   Result: negative
   (OECD Test Guideline 406)

   Germ cell mutagenicity
   Test Type: Ames test
   Test system: S. typhimurium
   Metabolic activation: with and without metabolic activation
   Method: OECD Test Guideline 471
   Result: negative

   Test Type: Micronucleus test
   Species: Mouse
   Cell type: Bone marrow
   Application Route: Intraperitoneal
   Method: OECD Test Guideline 474
Result: negative

**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.

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.

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.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA’s list of regulated carcinogens.

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

May be fatal if swallowed and enters airways.

**11.2 Additional Information**

Repeated dose toxicity - Rat - male and female - 90 Days - NOAEL (No observed adverse effect level) - 1,000 mg/kg

Remarks: (in analogy to similar products)

The value is given in analogy to the following substances: Oct-1-ene

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**SECTION 12: Ecological information**

**12.1 Toxicity**

**Toxicity to fish**

semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 0.003 mg/l - 96 h

(OECD Test Guideline 203)

**Toxicity to daphnia and other aquatic invertebrates**

semi-static test EC50 - Daphnia - > 0.003 mg/l - 48 h

(OECD Test Guideline 202)

**Toxicity to algae**

static test EC50 - Pseudokirchneriella subcapitata - > 0.001 mg/l - 72 h

(OECD Test Guideline 201)

**Toxicity to bacteria**

static test EC50 - activated sludge - > 1,000 mg/l - 3 h

(OECD Test Guideline 209)

**Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)**

EC50 - Daphnia magna (Water flea) - 0.0281 mg/l - 21 d

(OECD Test Guideline 211)
12.2 Persistence and degradability
Biodegradability  aerobic  - Exposure time 28 d
  Result: 48 % - Not readily biodegradable.  
  (OECD Test Guideline 301F)

12.3 Bioaccumulative potential
  No data available

12.4 Mobility in soil
  No data available

12.5 Results of PBT and vPvB assessment
  PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties
  No data available

12.7 Other adverse effects
  No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods
  Product
  Offer surplus and non-recyclable solutions to a licensed disposal company.

  Contaminated packaging
  Dispose of as unused product.

SECTION 14: Transport information

  DOT (US)
  Not dangerous goods

  IMDG
  Not dangerous goods

  IATA
  Not dangerous goods

  Further information
  Not classified as dangerous in the meaning of transport regulations.

SECTION 15: Regulatory information

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

  SARA 313 Components
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.

**SARA 311/312 Hazards**
No SARA Hazards

**Massachusetts Right To Know Components**
No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know Components**

<table>
<thead>
<tr>
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<tbody>
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**New Jersey Right To Know Components**

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

**SECTION 16: Other information**

**Further information**
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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 Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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