

Octanoic acid SDS/MSDS (Safety Data Sheet)

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

- * Product Name: Octanoic acid
- * Catalog Number: S6296
- * CAS Number: 124-07-2
- * IUPAC Name: Octanoic acid

Relevant identified uses and uses advised against

- * Identified uses: For research and development use only; laboratory chemicals; manufacture of substances.
- * Uses advised against: Not for pharmaceutical, household, or other unapproved uses.

Details of the supplier

- * Company: Selleck Chemicals
- * TollFree: +1 877 796-6397
- * Tel: +1 832 582-8158
- * Fax: +1 832 582-8590

Emergency telephone number

- * Emergency phone #: +1 832 582-8158

2. HAZARDS IDENTIFICATION

2.1 GHS classification in accordance with 29 CFR 1910 (OSHA HCS):

- Acute toxicity (oral): Category 4. H302
- Acute toxicity (dermal): Category 3. H311
- Skin corrosion: Category 1. H314
- Serious eye damage: Category 1. H318
- Acute aquatic toxicity: Category 3. H402
- Chronic aquatic toxicity: Category 3. H412

2.2 GHS Label elements, including precautionary statements

Hazard Pictogram(s)



Signal Word

Danger

Hazard statement(s)

- H302: Harmful if swallowed
- H311: Toxic in contact with skin
- H314: Causes severe skin burns and eye damage
- H318: Causes serious eye damage
- H402: Harmful to aquatic life
- H412: Harmful to aquatic life with long lasting effects

Precautionary statement(s)

None.

Prevention	<p>P260: Do not breathe dust/fume/gas/mist/vapors/spray.</p> <p>P262: Do not get in eyes, on skin, or on clothing.</p> <p>P264: Wash hands thoroughly after handling.</p> <p>P264+P265: Wash hands thoroughly after handling. Do not touch eyes.</p> <p>P270: Do not eat, drink or smoke when using this product.</p> <p>P273: Avoid release to the environment.</p> <p>P280: Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.</p>
Response	<p>P301+P317: IF SWALLOWED: Get medical help.</p> <p>P301+P330: IF SWALLOWED: Rinse mouth.</p> <p>P302+P352: IF ON SKIN: wash with plenty of water.</p> <p>P302+P361: IF ON SKIN: Take off immediately all contaminated clothing.</p> <p>P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P305+P354: IF IN EYES: Immediately rinse with water for several minutes.</p> <p>P316: Get emergency medical help immediately.</p> <p>P317: Get emergency medical help.</p> <p>P321: Specific treatment (see information on this label and safety datasheet)).</p> <p>P330: Rinse mouth.</p> <p>P331: Do NOT induce vomiting.</p> <p>P338: Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P354: Immediately rinse with water for several minutes.</p> <p>P361+P364: Take off immediately all contaminated clothing and wash it before reuse.</p> <p>P363: Wash contaminated clothing before reuse.</p>
Storage	P405: Store locked up.
Disposal	P501: P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards

None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Product name: Octanoic acid

CAS Number: 124-07-2

PubChem CID: 379

Molecular formula: C₈H₁₆O₂

Molecular weight: 144.21 g/mol

IUPAC name: octanoic acid

3.2 Mixtures

Not applicable (pure substance).

4. FIRST-AID MEASURES

4.1 Description of first aid measures

Inhalation: INHALATION: IMMEDIATELY leave the contaminated area; take deep breaths of fresh air. If symptoms (such as wheezing, coughing, shortness of breath, or burning in the mouth, throat, or chest) develop, call a physician and be prepared to transport the victim to a hospital. Provide proper respiratory protection to rescuers entering an unknown atmosphere. Whenever possible, Self-Contained Breathing Apparatus (SCBA) should be used; if not available, use a level of protection greater than or equal to t

Skin contact: SKIN: IMMEDIATELY flood affected skin with water while removing and isolating all contaminated clothing. Gently wash all affected skin areas thoroughly with soap and water. IMMEDIATELY call a hospital or poison control center even if no symptoms (such as redness or irritation) develop. IMMEDIATELY transport the victim to a hospital for treatment after washing the affected areas.

Eye contact: EYES: First check the victim for contact lenses and remove if present. Flush victim's eyes with water or normal saline solution for 20 to 30 minutes while simultaneously calling a hospital or poison control center. Do not put any ointments, oils, or medication in the victim's eyes without specific instructions from a physician. IMMEDIATELY transport the victim after flushing eyes to a hospital even if no symptoms (such as redness or irritation) develop.

Ingestion: INGESTION: DO NOT INDUCE VOMITING. Corrosive chemicals will destroy the membranes of the mouth, throat, and esophagus and, in addition, have a high risk of being aspirated into the victim's lungs during vomiting which increases the medical problems. If the victim is conscious and not convulsing, give 1 or 2 glasses of water to dilute the chemical and IMMEDIATELY call a hospital or poison control center. IMMEDIATELY transport the victim to a hospital. If the victim is convulsing or unconscious, d

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 (Toxicological Information).

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Contact a poison control center or physician for severe exposure.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable: Water spray, dry chemical, carbon dioxide (CO₂), alcohol-resistant foam.

Unsuitable: None known.

5.2 Specific hazards arising from the substance or mixture

Excerpt from ERG Guide 153 [Substances - Toxic and/or Corrosive (Combustible)]:

SMALL FIRE: Dry chemical, CO₂ or water spray.

LARGE FIRE: Dry chemical, CO₂, alcohol-resistant foam or water spray. If it can be done safely, move undamaged containers away from the area around the fire. Dike runoff from fire control for later disposal.

FIRE INVOLVING TANKS, RAIL TANK CARS OR HIGHWAY TANKS: Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles. Do not get water inside containers. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks in direct contact with flames. (ERG, 2024)

If material on fire or involved in fire: Use water in flooding quantities as fog. Solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water. Apply water from as far a distance as possible. Use "alcohol" foam, dry chemical or carbon dioxide. Use water spray to knock-down vapors..

5.3 Advice for firefighters

Wear self-contained breathing apparatus (SCBA) and full protective clothing.

Fight fire from upwind. Cool containers with water spray until fire is extinguished.

Flash point: 230 °F (NTP, 1992)

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear appropriate personal protective equipment (see Section 8).

Avoid breathing dust/vapor. Ensure adequate ventilation.

Evacuate personnel to safe areas. Keep people away from and upwind of spill.

WARNING: Highly toxic — only trained personnel should handle spills.

6.2 Environmental precautions

Prevent product from entering drains, waterways, or soil.

Contain spill with inert absorbent material.

6.3 Methods and materials for containment and cleaning up

Excerpt from ERG Guide 153 [Substances - Toxic and/or Corrosive (Combustible)]:

IMMEDIATE PRECAUTIONARY MEASURE: Isolate spill or leak area in all directions for at least 50 meters (150 feet) for liquids and at least 25 meters (75 feet) for solids.

SPILL: Increase the immediate precautionary measure distance, in the downwind direction, as necessary.

FIRE: If tank, rail tank car or highway tank is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions. (ERG, 2024)

Environmental considerations: Land spill: Dig a pit, pond, lagoon, holding area to contain liquid or solid material.

/SRP: If time permits, pits, ponds, lagoons, soak holes, or holding areas should be sealed with an impermeable flexible membrane liner./ Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete.

Neutralize with agricultural lime (CaO), crushed limestone (CaCO₃) or sodium bicarbonate (NaHCO₃). Absorb bulk liquid with fly ash, cement powder, or commercial sorbents.

Environmental considerations: Water spill: Use natural barriers or oil spill control booms to limit spill travel.

Neutralize with agricultural lime (CaO), crushed limestone (CaCO₃) or sodium bicarbonate (NaHCO₃). Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates.

Environmental considerations: Air spill: Apply water spray or mist to knock down vapors. Vapor knockdown water is corrosive or toxic and should be diked for containment.

ENVIRONMENTAL HAZARDS (5 gallons or greater): Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA./65 Disinfecting Heavy Duty Acid Bathroom Cleaner/

SRP: The most favorable course of action is to use an alternative chemical product with less inherent propensity for occupational exposure or environmental contamination. Recycle any unused portion of the material for its approved use or return it to the manufacturer or supplier. Ultimate disposal of the chemical must consider: the material's impact on air quality; potential migration in soil or water; effects on animal, aquatic, and plant life; and conformance with environmental and public health regulations.

For containers less than 1 gallon: Do not reuse container. Wrap container and discard in the trash. (1 gal. bladder in box) Remove empty bladder from outer corrugated box. Do not reuse bladder. Wrap bladder and box and put in trash. **For containers greater than 1 gallon: Pesticide Disposal:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance. **Container Disposal:** (greater

than 1 gallon): Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke. (2.5 gal. bladder in box): Remove empty bladder from outer corrugated box. Triple rinse bladder (or equivalent).

Offer box and bladder for recycling or dispose of in a sanitary landfill or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke./65 Disinfecting Heavy Duty Acid Bathroom Cleaner/

SRP: The scientific literature for the use of contact lenses in industry is conflicting. The benefit or detrimental effects of wearing contact lenses depend not only upon the substance, but also on factors including the form of the substance, characteristics and duration of the exposure, the uses of other eye protection equipment, and the hygiene of the lenses. However, there may be individual substances whose irritating or corrosive properties are such that the wearing of contact lenses would be harmful to the eye. In those specific cases, contact lenses should not be worn. In any event, the usual eye protection equipment should be worn even when contact lenses are in place.

If material not on fire and not involved in fire: Keep sparks, flames, and other sources of ignition away. Keep material out of water sources and sewers. Build dikes to contain flow as necessary. Use water spray to knock-down vapors. Neutralize spilled material with crushed limestone, soda ash, or lime..

Personnel protection: Avoid breathing vapors. Keep upwind. Avoid bodily contact with the material. ... Do not handle broken packages unless wearing appropriate personal protective equipment. Wash away any material which may have contacted the body with copious amounts of water or soap and water. If contact with the material anticipated, wear appropriate chemical protective equipment.

Do not get in eyes, on skin, or on clothing. Wear protective eyewear (goggles, face shield, or safety glasses), protective clothing and rubber gloves. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse./65 Disinfecting Heavy Duty Acid Bathroom Cleaner/

For more Preventive Measures (Complete) data for OCTANOIC ACID (6 total), please visit the HSDB record page.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Excerpt from ERG Guide 153 [Substances - Toxic and/or Corrosive (Combustible)]:

ELIMINATE all ignition sources (no smoking, flares, sparks or flames) from immediate area. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. DO NOT GET WATER INSIDE CONTAINERS. (ERG, 2024)

Containers less than 1 gallon: Store in original container in areas inaccessible to children and persons unfamiliar with its proper use. Containers greater than 1 gallon: Do not contaminate water, food, feed by storage or disposal. ... Store this product in a cool, dry area, away from direct sunlight and heat../65 Disinfecting Heavy Duty Acid Bathroom Cleaner/

7.2 Conditions for safe storage, including any incompatibilities

Containers less than 1 gallon: Store in original container in areas inaccessible to children and persons unfamiliar with its proper use. Containers greater than 1 gallon: Do not contaminate water, food, feed by storage or disposal. ... Store this product in a cool, dry area, away from direct sunlight and heat../65 Disinfecting Heavy Duty Acid Bathroom Cleaner/

Store away from incompatible materials (see Section 10).

[Note: Specific storage temperature not available in public databases. Refer to supplier Certificate of Analysis (COA) for exact storage conditions.]

Store in original container. Keep upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure controls

8.1.1 Occupational exposure limits (OEL)

OSHA PEL: Not established.

ACGIH TLV: Not established.

NIOSH REL: Not established.

No occupational exposure limit values are established for this substance.

Use the lowest feasible exposure level (ALARA principle).

8.1.2 Appropriate engineering controls

Use in a well-ventilated area. Chemical fume hood recommended for powder handling.

8.2 Individual protection measures

8.2.1 Eye/face protection

Wear chemical safety goggles and face shield.

8.2.2 Skin protection

Wear protective gloves. Recommended material: Nitrile rubber.

Wear suitable protective clothing (lab coat).

8.2.3 Respiratory protection

Respiratory protection usually not required under normal use with adequate ventilation.

Use N95 respirator for large-scale powder handling.

8.2.4 Thermal hazards

Not applicable.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance: Octanoic acid appears as a colorless to light yellow liquid with a mild odor. Burns, but may be difficult to ignite. Corrosive to metals and tissue.

b) Odor: FAINT, FRUITY-ACID ODOR

c) Odor threshold: No data available

d) pH: No data available

e) Melting point/freezing point: 61 to 62 °F (NTP, 1992)

f) Initial boiling point and boiling range: 463.5 °F at 760 mmHg (NTP, 1992)

g) Flash point: 230 °F (NTP, 1992)

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 mmHg at 198.1 °F ; 5 mmHg at 237.4 °F; 760 mmHg at 459.5 °F (NTP, 1992)

l) Vapor density: No data available

m) Relative density: 0.91 (USCG, 1999) - Less dense than water; will float

n) Water solubility: less than 1 mg/mL at 64 °F (NTP, 1992)

o) Partition coefficient: n-octanol/water: Log P (n-octanol/water): 3

p) Auto-ignition temperature: No data available

q) Decomposition temperature: No data available

r) Viscosity: 5.74 mPa.sec

s) Explosive properties: No data available

t) Oxidizing properties: No data available

9.2 Other information

Topological Polar Surface Area (TPSA): 37.3 Å²

Complexity: 89

10. STABILITY AND REACTIVITY

10.1 Reactivity

No specific reactivity hazards identified under normal handling conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions under normal conditions.

10.4 Conditions to avoid

Avoid heat, sparks, open flames, direct sunlight, and moisture.

10.5 Incompatible materials

Strong oxidizing agents, strong acids, strong bases.

10.6 Hazardous decomposition products

Thermal decomposition may produce: Carbon monoxide (CO), Carbon dioxide (CO₂).

See also Section 5 (Fire-fighting measures) for combustion products.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:

No acute toxicity data available.

Skin corrosion/irritation:

Causes severe skin burns and eye damage (H314).

Serious eye damage/eye irritation:

Causes serious eye damage (H318).

Respiratory or skin sensitization:

No data available.

Germ cell mutagenicity:

No data available.

Carcinogenicity:

No data available.

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:

No data available.

11.2 Additional information

Carcinogen classification:

No indication of carcinogenicity to humans (not listed by IARC).

Exposure routes:

Ingestion

Signs and symptoms of exposure:

MCADD presents in early childhood with hypoketotic hypoglycemia and liver dysfunction, often preceded by extended periods of fasting or an infection with vomiting. Infants who are exclusively breast-fed may present in this manner shortly after birth, due to poor feeding. In some individuals the first manifestation of MCADD may be sudden death following a minor illness. A number of individuals with MCADD may remain completely asymptomatic, provided they never encounter a situation that sufficient

Data source: Hazardous Substances Data Bank (HSDB) via PubChem.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

LC50 *Leuciscus idus* 173 mg/L/48 hr /Conditions of bioassay not specified/

LC100 *Leuciscus idus* 300 mg/L/48 hr /Conditions of bioassay not specified/

LC50 *Brachydanio rerio* 110 mg/L/96 hr /Sodium salt; conditions of bioassay not specified/

LC100 *Brachydanio rerio* 130 mg/L/96 hr /Sodium salt; conditions of bioassay not specified/

For more Ecotoxicity Values (Complete) data for OCTANOIC ACID (20 total), please visit the HSDB record page.

/AQUATIC SPECIES/ *Cyprinus carpio* (Fish, fresh water) /was/ tested /with octanoic acid at/ concentrations ranging from 32 to 560 mg/L (could only be reached using TWEEN 80) /for/ 48 hr. LC0 = 100 mg/L, LC50 = 134 mg/L, LC100 = 180 mg/L ... The results indicate that at least part of the toxicity can be explained by its pH-lowering property.

/OTHER TERRESTRIAL SPECIES/ *Sinapis alba* (mustard) seeds were incubated on filter paper moistened with solution of /octanoic acid/ for 7 days at 25 °C in the dark. Germination % /were/ 0 for 1000 mg/L and 500 mg/L, and 43 for 100 mg/L. /Sodium salt/

/OTHER TERRESTRIAL SPECIES/ Abnormalities of cell division were seen in palmate newt eggs (*Triturus helveticus*) after 1 hr immersion in 1400 mg/L (described as saturated).

/OTHER TERRESTRIAL SPECIES/ *Paecilomyces* sp. (fungus) /was incubated/ at 25 °C for 24 hr. No germination after exposure to octanoic acid at 500 mg/L (acetone as solvent, same concn in controls).

For more Ecotoxicity Excerpts (Complete) data for OCTANOIC ACID (8 total), please visit the HSDB record

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

Log P (n-octanol/water): 3

Low potential for bioaccumulation (Log P < 3).

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available.

12.6 Other adverse effects

This substance is classified as hazardous to the aquatic environment.

13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods**

Waste Treatment Methods: Waste material must be disposed of in accordance with national and local regulations. Leave chemicals in original containers and do not mix with other waste. Handle uncleaned containers in the same manner as the product itself.

14. TRANSPORT INFORMATION**14.1 UN number**

Not regulated as dangerous goods (research quantities typically exempt).

14.2 UN proper shipping name

Not subject to transport regulations (small quantities for research use).

14.3 Transport hazard class(es)

Not classified as dangerous goods for transport (research quantities).

DOT label: Corrosive

14.4 Packing group

Not applicable (not regulated as dangerous goods in typical research quantities).

14.5 Environmental hazards

Marine pollutant: No (not classified as environmentally hazardous per GHS).

14.6 Special precautions for user

Transport in original packaging. Ensure containers are tightly sealed.

For bulk or commercial quantities, consult applicable transport regulations (DOT, IATA, IMDG).

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

Not applicable.

15. REGULATORY INFORMATION**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

US EPA / TSCA: Subject to EPA TSCA regulations

EU ECHA / REACH: Registered (REACH Active)

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:

Acute (short-term) health hazard

Environmental hazard

Massachusetts Right To Know Components:

This material contains components subject to the Massachusetts Right to Know Act. See Section 2 for hazard classification.

Pennsylvania Right To Know Components:

This material contains components subject to the Pennsylvania Right to Know Act. See Section 2 for hazard classification.

New Jersey Right To Know Components:

This material contains components subject to the New Jersey Right to Know Act. See Section 2 for hazard classification.

California Prop. 65 Components:

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

Other regulatory listings:

- The Australian Inventory of Industrial Chemicals: Chemical: Octanoic acid
- Status Regulation (EC): 2008/127, Reg. (EU) 2017/195, Reg. (EU) 2020/1160, Reg. (EU) 2023/1446, Reg. (EU) 2024/1280, Reg. (EU) 2024/2221, Reg. (EU) No 540/2011
- FDA Requirements: Substance added directly to human food affirmed as generally recognized as safe (GRAS). Caprylic acid is a food additive permitted for direct addition to food for human consumption, as long as 1) the quantity of the substance added to food does not exceed the amount reasonably required to accomplish

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out for this substance.

For research-use-only compounds, no CSA is required under REACH Annex I.

16. OTHER INFORMATION

Revision Date: 2026/09/09

Further Information: The information provided is believed to be correct but is not exhaustive and should be used only as a guideline based on current knowledge. It does not represent a guarantee of the properties of the product.

Selleck Chemicals Corporation and its Affiliates shall not be held liable for any damage resulting from handling or contact with the product.