

## Chemical Safety Data Sheet MSDS / SDS

## Myristic acid SDS

Revision Date:2024-04-25 Revision Number:1

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

Product name: Myristic acid

CAS: 544-63-8

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

Relevant identified uses: For R&amp;D use only. Not for medicinal, household or other use.

Uses advised against: none

**Company Identification**

Company: Chemicalbook.in

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**SECTION 2: Hazards identification****Classification of the substance or mixture**

Not classified.

**GHS label elements, including precautionary statements**

Signal word                      No signal word

**Hazard statement(s)**

none

**Precautionary statement(s)****Prevention**

none

**Response**

none

**Storage**

none

**Disposal**

none

**Other hazards which do not result in classification**

no data available

**SECTION 3: Composition/information on ingredients****Substance**

Chemical name:                      Myristic acid

Common names and  
synonyms:                      Myristic acid

CAS number:                      544-63-8

EC number:                      208-875-2

Concentration:                      100%

## SECTION 4: First aid measures

### Description of necessary first-aid measures

#### If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

#### Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

#### Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

#### Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

### Most important symptoms/effects, acute and delayed

**SYMPTOMS:** Symptoms of exposure to this compound may include irritation of the skin and eyes. **ACUTE/CHRONIC HAZARDS:** This compound may cause irritation of the skin and eyes. When heated to decomposition it emits acrid smoke and fumes. (NTP, 1992)

### Indication of immediate medical attention and special treatment needed, if necessary

Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand-valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR as necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. Organic acids and related compounds

## SECTION 5: Firefighting measures

### Suitable extinguishing media

Fires involving this material can be controlled with a dry chemical, carbon dioxide or Halon extinguisher. (NTP, 1992)

### Specific hazards arising from the chemical

This chemical is probably combustible. (NTP, 1992)

#### **Special protective actions for fire-fighters**

Wear self-contained breathing apparatus for firefighting if necessary.

### **SECTION 6: Accidental release measures**

#### **Personal precautions, protective equipment and emergency procedures**

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

#### **Environmental precautions**

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

#### **Methods and materials for containment and cleaning up**

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

### **SECTION 7: Handling and storage**

#### **Precautions for safe handling**

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

#### **Conditions for safe storage, including any incompatibilities**

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

## SECTION 8: Exposure controls/personal protection

### Control parameters

### Occupational Exposure limit values

no data available

### Biological limit values

no data available

### Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

### Individual protection measures, such as personal protective equipment (PPE)

#### Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

#### Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

#### Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

#### Thermal hazards

no data available

## SECTION 9: Physical and chemical properties and safety characteristics

Physical state: PHYSICAL DESCRIPTION: Oily white crystalline solid. (NTP, 1992)

Colour: Oily, white, crystalline solid

Odour: The odor should be faint with no rancidity.

Melting point/freezing point:	255°C(lit.)
Boiling point or initial boiling point and boiling range:	102°C/14mmHg(lit.)
Flammability:	no data available
Lower and upper explosion limit/flammability limit:	no data available
Flash point:	91°C(lit.)
Auto-ignition temperature:	no data available
Decomposition temperature:	no data available
pH:	no data available
Kinematic viscosity:	5.83 mPa sec at 70 deg C
Solubility:	less than 1 mg/mL at 64° F (NTP, 1992)
Partition coefficient n-octanol/water:	log Kow = 6.11
Vapour pressure:	1 mm Hg at 288° F ; 5 mm Hg at 345° F; 760 mm Hg at 604° F (NTP, 1992)
Density and/or relative density:	0.898 g/cm <sup>3</sup>
Relative vapour density:	no data available
Particle characteristics:	no data available

## SECTION 10: Stability and reactivity

### **Reactivity**

no data available

### **Chemical stability**

no data available

### **Possibility of hazardous reactions**

Combustible TETRADECANOIC ACID is a carboxylic acid. Carboxylic acids donate hydrogen ions if a base is present to accept them. They react in this way with all bases, both organic (for example, the amines) and inorganic. Their reactions with bases, called "neutralizations", are accompanied by the evolution of substantial amounts of heat. Neutralization between an acid and a base produces water plus a salt. Carboxylic acids with six or fewer carbon atoms are freely or moderately soluble in water; those with more than six carbons are slightly soluble in water. Soluble carboxylic acid dissociate to an extent in water to yield hydrogen ions. The pH of solutions of carboxylic acids is therefore less than 7.0. Many insoluble carboxylic acids react rapidly with aqueous solutions containing a chemical base and dissolve as the neutralization generates a soluble salt. Carboxylic acids in aqueous solution and liquid or molten carboxylic acids can react with active metals to form gaseous hydrogen and a metal salt. Such reactions occur in principle for solid carboxylic acids as well, but are slow if the solid acid remains dry. Even "insoluble" carboxylic acids may absorb enough water from the air and dissolve sufficiently in it to corrode or dissolve iron, steel, and aluminum parts and containers. Carboxylic acids, like other acids, react with cyanide salts to generate gaseous hydrogen cyanide. The reaction is slower for dry, solid carboxylic acids. Insoluble carboxylic acids react with solutions of cyanides to cause the release of gaseous hydrogen cyanide. Flammable and/or toxic gases and heat are generated by the reaction of carboxylic acids with diazo compounds, dithiocarbamates, isocyanates, mercaptans, nitrides, and sulfides. Carboxylic acids, especially in aqueous solution, also react with sulfites, nitrites, thiosulfates (to give H<sub>2</sub>S and SO<sub>3</sub>), dithionites (SO<sub>2</sub>), to generate flammable and/or toxic gases and heat. Their reaction with carbonates and bicarbonates generates a harmless gas (carbon dioxide) but still heat. Like other organic compounds, carboxylic acids can be oxidized by strong oxidizing agents and reduced by strong reducing agents. These reactions generate heat. A wide variety of products is possible. Like other acids, carboxylic acids may initiate polymerization reactions; like other acids, they often catalyze (increase the rate of) chemical reactions.

### **Conditions to avoid**

no data available

### **Incompatible materials**

no data available

### **Hazardous decomposition products**

When heated to decomposition it emits acrid smoke and irritating fumes.

## **SECTION 11: Toxicological information**

### **Acute toxicity**

Oral: LD50 Rat oral >10000 mg/kg C12: 2.7%, C14 95.4%, C16 1.9%

Inhalation: no data available

Dermal: no data available

### **Skin corrosion/irritation**

no data available

### **Serious eye damage/irritation**

no data available

### **Respiratory or skin sensitization**

no data available

### **Germ cell mutagenicity**

no data available

### **Carcinogenicity**

no data available

### **Reproductive toxicity**

no data available

### **STOT-single exposure**

no data available



**STOT-repeated exposure**

no data available

**Aspiration hazard**

no data available

**SECTION 12: Ecological information****Toxicity**

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

**Persistence and degradability**

**AEROBIC:** Myristic acid reached 2% of its theoretical BOD over 5 days using a sewage inoculum(1). Fatty acids above 7 to 11 carbon atoms showed increased resistance to oxidation in Warburg respirometer tests using activated sludge from three different sources(2). In Warburg respirometer tests using an activated sludge seed, myristic acid, present at a concn of 500 ppm, reached 0.6, 1.7, and 3.7% of its theoretical oxygen demand after 6, 12, and 24 hours incubation, respectively(3). In Warburg tests using an unacclimated activated sludge inoculum, myristic acid, present as the sodium salt, was observed to biodegrade with half-lives of 13, 20, and 30 hours at 30, 25, and 20 deg C, respectively(4).

**Bioaccumulative potential**

An estimated BCF of 56 was calculated in fish for myristic acid(SRC), using a log Kow of 6.11(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is moderate, provided the compound is not metabolized by the organism(SRC).

**Mobility in soil**

The Koc of myristic acid is estimated as 50,000 fro the free acid(SRC), using a log Kow of 6.11(1) and a regression-derived equation(2). According to a classification scheme(3), this estimated Koc value suggests that undissociated myristic acid is expected to be immobile in soil. The pKa of myristic acid is 4.90(4), indicating that this compound will exist almost entirely in anion form in the environment and anions generally do not adsorb more strongly to soils containing organic carbon and clay than their neutral counterparts(5).

**Other adverse effects**

no data available

**SECTION 13: Disposal considerations****Disposal methods****Product**

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

**Contaminated packaging**

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

**SECTION 14: Transport information****UN Number**

ADR/RID: UN1479 (For reference only, please check.)

IMDG: UN1479 (For reference only, please check.)

IATA: UN1479 (For reference only, please check.)

**UN Proper Shipping Name**

ADR/RID: OXIDIZING SOLID, N.O.S. (For reference only, please check.)

IMDG: OXIDIZING SOLID, N.O.S. (For reference only, please check.)

IATA: OXIDIZING SOLID, N.O.S. (For reference only, please check.)

**Transport hazard class(es)**

ADR/RID: 5.1 (For reference only, please check.)

IMDG: 5.1 (For reference only, please check.)

IATA: 5.1 (For reference only, please check.)

**Packing group, if applicable**

ADR/RID: I (For reference only, please check.)

IMDG: I (For reference only, please check.)

IATA: I (For reference only, please check.)

**Environmental hazards**

ADR/RID: No

IMDG: No

IATA: No

**Special precautions for user**

no data available

**Transport in bulk according to IMO instruments**

no data available

**SECTION 15: Regulatory information**

**Safety, health and environmental regulations specific for the product in question**

**European Inventory of Existing Commercial Chemical Substances (EINECS)**

Listed.

**EC Inventory**

Listed.

**United States Toxic Substances Control Act (TSCA) Inventory**

Listed.

**China Catalog of Hazardous chemicals 2015**

Not Listed.

**New Zealand Inventory of Chemicals (NZIoC)**

Listed.

(PICCS)

Listed.

**Vietnam National Chemical Inventory**

Listed.

(IECSC)

Listed.

**Korea Existing Chemicals List (KECL)**

Listed.

## SECTION 16: Other information

### Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

### References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:  
[http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website:  
<http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

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