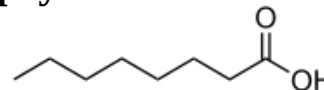


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Safety Data Sheet

Caprylic Acid



I IDENTIFICATION

Synonyms octanoic acid; octic acid, C-8 acid; 1-heptanecarboxylic acid & others
CAS # 124-07-2
Europe EC # 204-677-5
Material Use dyes, pharmaceuticals, flavourings (food grade), antiseptics, fungicides* & others

EMERGENCY INFORMATION

In the U.S.A. Call CHEMTREC (800) 424-9300
In Canada Call CANUTEC (collect) (613) 996-6666

II HAZARD IDENTIFICATION

GHS Class oral, acute skin corrosive
(Category) (4) (1C)
Signal Words WARNING DANGER
Hazard Statements harmful if swallowed causes severe skin burns & eye damage (H302) (H314)



GHS Precautionary Statements for Labelling

P262, P264 Do not get in eyes or on skin. Wash thoroughly after handling.
P280 Wear eye protection, protective gloves and clothing of neoprene, nitrile or "Viton".
P313 & P333 If skin irritation or rash occurs, get medical advice/attention.
P362, P364 Take off contaminated clothing and wash it before reuse.
P305, P351, P338 Rinse cautiously with water for several minutes. Remove contact lenses if present & easy to do. Continue rinsing.
P330, P301 & P310 Rinse mouth. If swallowed, immediately call a doctor.

III COMPOSITION

	CAS NUMBER	%	TLV ppm / mg/m ³	LD ₅₀ (mg/kg) ORAL	LD ₅₀ (mg/kg) SKIN	LC ₅₀ mg/m ³ INHALATION
Caprylic Acid	124-07-2	100%	not listed	>>1283	>>2000	>162

IV FIRST AID

SKIN: **Immediately**, wash with soap & plenty of water. Remove contaminated clothing and do not reuse until thoroughly laundered. Seek medical help promptly if there is persistent itching or redness in the affected area.
EYES: **Immediately**, wash eyes with plenty of water, holding eyelids open. Seek medical assistance promptly.
INHALATION: Remove from contaminated area promptly. **CAUTION: Rescuer must not endanger himself!** If victim's breathing stops, administer artificial respiration and seek medical aid promptly.
INGESTION: Rinse mouth. Then give plenty of water to dilute product, followed by milk (if available) to neutralize. Do not induce vomiting (NOTE below). Keep victim quiet. If vomiting occurs, lower victim's head below hips to prevent inhalation of vomited material. Seek medical help promptly.

NOTE: Corrosive substance: apply first aid immediately! Inadvertent inhalation of vomited material may seriously damage the lungs. The stomach should only be emptied under medical supervision, after the installation of an airway to protect the lungs.

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V FLAMMABILITY & FIRE-FIGHTING

Flash Point	136°C / 276°F (Pensky-Martens closed cup) ¹
Autoignition Temperature	above 300°C / 570°F ¹
Flammable Limits	not known
Combustion Products	carbon monoxide, nitrogen oxides, irritating smoke & fumes, part oxidised hydrocarbon fragments
Firefighting Precautions	as for an oil fire (<i>water fog, alcohol-resistant foam, dry chemical</i>); firefighters must wear SCBA
Static Discharge	cannot accumulate a static charge

VI ACCIDENTAL RELEASE MEASURES

Leak Precaution	dyke to control spillage and prevent environmental contamination
Handling Spill	recover free liquid with suitable pumps; absorb residue on an inert sorbent, sweep, shovel & store in closed containers for disposal

VII HANDLING & STORAGE

Store above 16°C / 61°F, & use away from oxidising agents & substances listed in Part X. Avoid all contact with skin & wash work clothes frequently. An eye bath & safety shower should be available near the workplace.

VIII EXPOSURE CONTROL & PERSONAL PROTECTION

ACGIH TLV	not listed	ACGIH STEL	not listed
OSHA PEL	not listed	OSHA STEL	not listed
Ventilation	no special mechanical ventilation required		
Hands	wear neoprene, nitrile or "Viton" gloves – <i>always confirm suitability with supplier</i>		
Eyes	safety glasses with side shields or chemical goggles – <i>always protect eyes!</i>		
Clothing	wear impermeable (hands, above) apron, boots, long sleeves, and a face shield if splashing is anticipated		

IX PHYSICAL AND CHEMICAL PROPERTIES

NOTE: for Flash Point, Autoignition Temp, & Flammable Limits see Part 5.

Odour & Appearance	clear, colourless, oily liquid with an unpleasant, irritating odour like limburger cheese <i>may form leafy crystals below 16°C / 61°F</i>
Odour Threshold	0.008ppm
Vapour Pressure	0.004mmHg / 0.0005kPa (25°C / 77°F) ¹ 1mmHg / 0.13kPa (92°C / 198°F)
Evaporation Rate (<i>Butyl Acetate</i> = 1)	not known – <i>not volatile</i>
Vapour Density (air = 1)	5
Boiling Point	237°C / 459°F ¹ , 239°C / 462°F ¹
Melting Point	~16.5°C / ~61-62°F ¹ – 3 reports
Decomposition Temperature	not known
Density	0.91kg/litre (20°C) ¹
Water Solubility	680mg/litre (20°C / 68°C) ¹ , 790mg/litre (30°C / 86°F) ¹ – <i>low solubility</i>
- in other solvents	ether, acetone, most hydrocarbons, carbon tetrachloride
Log K _{oc} (<i>Octanol/H₂O Partition Coefficient</i>)	2.92 & 3.05 ¹
Viscosity	5.7-6.6centipoise (20°C / 68°F) ¹ – <i>several measurements . . .</i>
pH	3.6 – <i>calculated for saturated solution; weak acid</i>
Conversion Factor	1ppm = 5.89mg/m ³
Molecular Weight	144grams/mole

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X REACTIVITY

Dangerously Reactive With	strong oxidising agents, strong reducing agents (<i>eg: lithiumhydride</i>)
Also Reactive With	strong alkalis may cause dangerously rapid saponification; may corrode some grades of steel & stainless steel 304 at temperatures above 190°C / 370°F
Chemical Stability	stable; will not polymerize
Decomposes in Presence of	not known
Decomposition Products	short-chain aldehydes (irritating) may form in fire
Mechanical Impact	not sensitive

XI TOXICITY INFORMATION**i. ACUTE EXPOSURE**

Skin Contact	corrosive ¹ , particularly if contact is prolonged; permanent scarring is possible
Skin Absorption	probably not absorbed through the skin; toxic effects unlikely by this route
Eye Contact	severely irritating ¹ , probably corrosive to eyes based on skin effect; permanent damage possible
Inhalation	not known – mists must be treated as irritating or corrosive to nose, throat & lungs
Ingestion	not known; <i>presumably corrosive to mouth, throat and stomach – not a route of industrial exposure</i>
LD ₅₀ (oral)	>2000 & >5000mg/kg (rat) ¹ , 1283 & 10,080mg/kg (rat – RTECS data)
LD ₅₀ (skin)	>2000mg/kg (rabbit) ¹ , >5000mg/kg (rabbit – RTECS data)
LC ₅₀ (inhalation)	>162mg/m ³ (rat) ¹ – <i>no mortality in this study</i>

ii. CHRONIC EXPOSURE

General	repeated, brief contact likely to cause redness and dermatitis
Sensitising	not a sensitiser ¹
Carcinogen/Tumorigen	not known to be a tumorigen or a carcinogen in humans or animals
Reproductive Effect	no known effect on humans or animals ¹
Mutagen/Teratogen	not known to be a mutagen or teratogen in humans or animals ¹
Synergistic With	not known

XII ECOLOGICAL INFORMATION

Bioaccumulation	readily & rapidly metabolised, will not bioaccumulate
Biodegradation	readily biodegradable in the presence of oxygen; 60% in 5 days, 69% & 90-100% in 20 days; >72% in 30 days ¹
Abiotic Degradation	expected ½-life in air less than 2 days
Mobility in soil, water	water insoluble; low mobility in soil & the water column
Aquatic Toxicity	
LC ₅₀ (96 hr, fish)	110mg/litre (Brachydanio rerio), 310mg/litre (Oryzias latipes), 22 & 40mg/litre (Lepomis macrochirus) ¹
LC ₅₀ (48hr, crustacea)	>20 & 550mg/litre (Daphnia magna) ¹ , 128mg/litre (Hyale plumulosa) ¹ , 240mg/litre (Artemiasalina, 17hr) ¹
EC ₅₀ (72hr, algæ)	31mg/litre (Pseudokirchnerella subcapitata) ¹ , 144mg/litre (Nitzshia closterium, 96hr)
EC ₅₀ microorganisms	260 ¹ & 7200mg/litre (Bacillus subtilis)
EC ₁₀ microorganisms	30 & 100 & 912 ¹ mg/litre (Pseudomonas putida)

XIII DISPOSAL CONSIDERATIONS

Waste Disposal	do not flush to sewer; may be incinerated in approved facility with flue gas monitoring & scrubbing
Containers	Drums should be reused. Recondition and pressure test by a licensed reconditioner prior to re-use. Pails must be vented and thoroughly dried prior to crushing and recycling. IBCs (intermediate bulk containers): polyethylene bottle must be pressure tested & recertified at 30 months. Replace at 60 months (5 years). Steel containers must be inspected, pressure tested & recertified every 5 years. Warning: never cut, drill, weld or grind on or near this container, even if empty.

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XIV TRANSPORT INFORMATION**USA 49 CFR & Canada TDG**

Product Identification Number

UN – 3265

Shipping Name

OR

corrosive liquid, acidic, organic N.O.S. (caprylic acid)**corrosive liquid, acidic, organic N.O.S. (octanoic acid)**

Classification

Class 8; Packing Group III**Marine Pollution****not a marine pollutant****ERAP Required****No****XV REGULATIONS****Canada DSL****on inventory****U.S.A. TSCA****ACTIVE****Europe EINECS****on inventory****SARA**Physical HazardsChemical Hazards

- ☐ Explosive
☐ Flammable
☐ Oxidizer (liquid, solid or gas)
☐ Self-reactive
☐ Pyrophoric (liquid or solid)
☐ Pyrophoric Gas
☐ Self-heating
☐ Organic peroxide
☐ Corrosive to metal
☐ Gas under pressure (compressed gas)
☐ In contact with water emits flammable gas
☐ Combustible Dust
☐ Hazard Not Otherwise Classified

- ☒ Acute toxicity (any route of exposure)
☒ Skin corrosion or irritation
☒ Serious eye damage or eye irritation
☐ Respiratory or skin sensitization
☐ Germ cell mutagenicity
☐ Carcinogenicity
☐ Reproductive toxicity
☐ Specific target organ toxicity (single or repeated ex.)
☐ Aspiration hazard
☐ Simple Asphyxiant
☐ Hazard Not Otherwise Classified

U.S.A. Regulations:

Allowable Tolerances: Residues of the following chemical substances are exempted from the requirement of a tolerance when used in accordance with good manufacturing practice as ingredients in an antimicrobial pesticide formulation, provided that the substance is applied on a semi-permanent or permanent food-contact surface (other than being applied on food packaging) with adequate draining before contact with food. (a) The following chemical substances when used as ingredients in an antimicrobial pesticide formulation may be applied to: Food-contact surfaces in public eating places, dairy-processing equipment, and food-processing equipment and utensils. Octanoic acid is included on this list. Limit: when ready for use, the end-use concentration is not to exceed 52 ppm. Residues of the following chemical substances are exempted from the requirement of a tolerance when used in accordance with good manufacturing practice as ingredients in an antimicrobial pesticide formulation, provided that the substance is applied on a semi-permanent or permanent food-contact surface (other than being applied on food packaging) with adequate draining before contact with food. ... (b) The following chemical substances when used as ingredients in an antimicrobial pesticide formulation may be applied to: Dairy processing equipment, and food-processing equipment and utensils. Octanoic acid is included on this list. Limit: when ready for use, the end-use concentration is not to exceed 176 ppm. Residues of the following chemical substances are exempted from the requirement of a tolerance when used in accordance with good manufacturing practice as ingredients in an antimicrobial pesticide formulation, provided that the substance is applied on a semi-permanent or permanent food-contact surface (other than being applied on food packaging) with adequate draining before contact with food. ... (c) The following chemical substances when used as ingredients in an antimicrobial pesticide formulation may be applied to: Food-processing equipment and utensils. Octanoic acid is included on this list. Limit: when ready for use, the end-use concentration is not to exceed 234 ppm.

FDA Requirements: Substance added directly to human food affirmed as generally recognized as safe. 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 its intended physical, nutritive, or other technical effect in food, and 2) any substance intended for use in or on food is of appropriate food grade and is prepared and handled as a food ingredient.

XVI OTHER INFORMATION**Date of Preparation****August 2011****Date of Revision****April 2013, July 2016, November 2017, February 2019 (D. Moreno)**Prepared for Rierden Chemical & Trading Company, by **Peter Bursztyn**

With data from Registry of Toxic Effects of Chemical Substances (RTECS - USA), Hazardous Substance Data Base (HSDB - USA), Cheminfo (CCOHS - Canada), OSHA website, European Chemicals Agency (ECHA) dossiers & other sources (below if used), as required/available.

(1) European Chemicals Agency (ECHA) dossier for octanoic acid: <http://echa.europa.eu/registration-dossier/-/registered-dossier/15370>

last page of SDS**PLEASE ENSURE THAT THIS MSDS IS GIVEN TO, AND EXPLAINED TO PEOPLE USING THIS PRODUCT.****EMERGENCY INFORMATION:****Call CHEMTREC****(800) 424-9300**