

# • SAFETY DATA SHEET

Version 7.1  
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## SECTION 1. IDENTIFICATION

### 1.1 Product identifiers

Product name : Caprylocaproyl Polyoxylglycerides

Product Number : 1091505  
Brand : US Pharmacopeia

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

Identified uses : Laboratory chemicals, Synthesis of substances

Uses advised against : The product is being supplied under the TSCA R&D Exemption (40 CFR Section 720.36). It is the recipient's responsibility to comply with the requirements of the R&D exemption. The product may not be used for a non-exempt commercial purpose under TSCA unless appropriate consent is granted in writing by MilliporeSigma.

### 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 number

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

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## SECTION 2. HAZARDS IDENTIFICATION

### GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

#### Hazards for the product as supplied

Skin corrosion : Sub-category 1C

Serious eye damage : Category 1

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Short-term (acute) aquatic hazard : Category 3

Long-term (chronic) aquatic hazard : Category 3

### Other hazards

None known.

### GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H314 Causes severe skin burns and eye damage.  
H412 Harmful to aquatic life with long lasting effects.

Supplemental Hazard Statements : Corrosive to the respiratory tract.

Precautionary statements : **Prevention:**  
P264 Wash skin thoroughly after handling.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**  
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.  
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.  
P363 Wash contaminated clothing before reuse.

**Storage:**  
P405 Store locked up.

**Disposal:**  
P501 Dispose of contents/ container to an approved



**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture  
 CAS-No. : Not Assigned

**Components**

Chemical name	CAS No./Unique ID	Concentration (% w/w)	Trade secret
Octanoic acid	124-07-2*	$\geq 65 - \leq 85$	TSC
Decanoic acid	334-48-5*	$\geq 30 - \leq 60$	TSC
glycerine	56-81-5*	$\geq 3 - \leq 7$	TSC
lauric acid	143-07-7*	$\geq 1 - \leq 5$	TSC
hexanoic acid	142-62-1*	$\geq 1 - \leq 5$	TSC

\* Indicates that the identifier is a CAS No.

TSC- the actual concentration or concentration range is withheld as a trade secret

**SECTION 4. FIRST AID MEASURES**

General advice : First aiders need to protect themselves.  
 Show this safety data sheet to the doctor in attendance.

If inhaled : After inhalation: fresh air. Call in physician.

In case of skin contact : In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
 Call a physician immediately.

In case of eye contact : After eye contact: rinse out with plenty of water.  
 Immediately call in ophthalmologist.  
 Remove contact lenses.

If swallowed : After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation).  
 Call a physician immediately.  
 Do not attempt to neutralise.

Most important symptoms and effects, : The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in



both acute and delayed            section 11

Protection of first-aiders        : For personal protection see section 8.

Notes to physician                : No data available

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## SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media        : Foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry powder

Unsuitable extinguishing media    : For this substance/mixture no limitations of extinguishing agents are given.

Specific hazards during fire fighting    : Mixture with combustible ingredients.

Development of hazardous combustion gases or vapours possible in the event of fire.

Hazardous combustion products        : Carbon oxides

Specific extinguishing methods        : No data available

Further information                    : Prevent fire extinguishing water from contaminating surface water or the ground water system.

Special protective equipment for fire-fighters    : Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures    : Advice for non-emergency personnel:  
Do not breathe vapours, aerosols.  
Avoid substance contact.  
Ensure adequate ventilation.  
Evacuate the danger area, observe emergency procedures, consult an expert.  
Advice for emergency responders:



For personal protection see section 8.

Environmental precautions : Do not let product enter drains.

Methods and materials for containment and cleaning up : Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb® ). Dispose of properly. Clean up affected area.

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## SECTION 7. HANDLING AND STORAGE

For precautions see section 2.2.

Further information on storage conditions : Tightly closed.

Storage class : 8A, Combustible, corrosive hazardous materials

Recommended storage temperature : Recommended storage temperature see product label.

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## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
glycerine	56-81-5	TWA (mist, respirable fraction)	5 mg/m <sup>3</sup>	OSHA Z-1
		TWA (mist, total dust)	15 mg/m <sup>3</sup>	OSHA Z-1

**Engineering measures** : No data available

### Personal protective equipment

Respiratory protection : required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.



Recommended Filter type: Filter type ABEK type:

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

#### Hand protection

Remarks : required

Eye protection : Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).  
Tightly fitting safety goggles

Skin and body protection : protective clothing

Hygiene measures : Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Color : No data available

Odor : No data available

Odor Threshold : No data available  
pH : No data available

Melting point : No data available

Boiling point/boiling range : No data available

Flash point : No data available

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Flammability (liquids) : No data available



Burning rate	: No data available
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: No data available
Vapor pressure	: No data available
Relative vapour density	: No data available
Relative density	: No data available
Density	: No data available
Water solubility	: No data available
Partition coefficient: n- octanol/water	: No data available
Autoignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Flow time	: No data available
Explosive properties	: Not classified as explosive.
Oxidizing properties	: none
Particle characteristics Particle size	: No data available

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## SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No data available
Chemical stability	: The product is chemically stable under standard ambient conditions (room temperature) .
Possibility of hazardous reactions	: No data available



Conditions to avoid : no information available

Incompatible materials : Strong oxidizing agents

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

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## SECTION 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Mixture

##### Acute toxicity

Acute toxicity estimate Oral - 2,500 mg/kg  
(Calculation method)

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Acute toxicity estimate Dermal - 4,717 mg/kg  
(Calculation method)

##### Skin corrosion/irritation

Remarks: Mixture causes burns.

##### Serious eye damage/eye irritation

Remarks: Mixture causes serious eye damage.  
Risk of blindness!

##### Respiratory or skin sensitization

No data available

##### Germ cell mutagenicity

No data available

##### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component 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

No data available



## 11.2 Additional Information

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

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

Kidney - Irregularities - Based on Human Evidence

### Components

#### Octanoic acid

##### Acute toxicity

LD50 Oral - Rat - male and female - > 2,000 mg/kg  
(OECD Test Guideline 401)

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract, Inhalation may lead to the formation of oedemas in the respiratory tract., Symptoms may be delayed.

LD50 Dermal - Rabbit - > 5,000 mg/kg

Remarks: (RTECS)

##### Skin corrosion/irritation

Skin - Rabbit

Result: Corrosive after 1 to 4 hours of exposure - 4 h  
(OECD Test Guideline 404)

Remarks: (Regulation (EC) No 1272/2008, Annex VI)

##### Serious eye damage/eye irritation

Remarks: Causes serious eye damage.

##### Respiratory or skin sensitization

No data available

##### Germ cell mutagenicity

Test Type: Chromosome aberration test in vitro

Test system: Human lymphocytes

Result: negative

Test Type: Chromosome aberration test in vitro

Test system: Chinese hamster lung cells

Result: negative

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Result: negative

Test Type: Chromosome aberration test in vitro

Test system: Chinese hamster ovary cells

Result: Positive results were obtained in some in vitro tests.

##### Carcinogenicity

No data available



**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

Acute oral toxicity - If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract, Inhalation may lead to the formation of oedemas in the respiratory tract., Symptoms may be delayed.

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**Decanoic acid****Acute toxicity**

LD50 Oral - Rat - male and female - > 2,000 mg/kg  
(OECD Test Guideline 401)

Inhalation: No data available

LD50 Dermal - Rat - male and female - > 2,000 mg/kg  
(OECD Test Guideline 402)

**Skin corrosion/irritation**

Skin - Rabbit

Result: Irritating to skin. - 24 h

(Draize Test)

Remarks: (RTECS)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

**Serious eye damage/eye irritation**

Eyes - Rabbit

Result: Eye irritation

(OECD Test Guideline 405)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

**Respiratory or skin sensitization**

Buehler Test - Guinea pig



Result: negative  
(OECD Test Guideline 406)

**Germ cell mutagenicity**

Test Type: Ames test  
Test system: Salmonella typhimurium  
Result: negative  
Test Type: In vitro mammalian cell gene mutation test  
Test system: mouse lymphoma cells  
Result: negative  
Test Type: Chromosome aberration test in vitro  
Test system: Human lymphocytes  
Result: negative

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

**Aspiration hazard**

No data available

**glycerine**

**Acute toxicity**

LD50 Oral - Rat - female - 27,200 mg/kg  
Remarks: (ECHA)  
LC50 Inhalation - Rat - male and female - 4 h - > 5,850 mg/l - aerosol  
Remarks: (ECHA)  
LD50 Dermal - Guinea pig - male and female - 56,750 mg/kg  
Remarks: (ECHA)

**Skin corrosion/irritation**

Skin - Rabbit  
Result: No skin irritation - 24 h  
Remarks: (ECHA)

**Serious eye damage/eye irritation**

Eyes - Rabbit  
Result: No eye irritation - 7 Days  
Remarks: (ECHA)

**Respiratory or skin sensitization**

Local lymph node assay (LLNA) - Mouse



Result: negative  
(OECD Test Guideline 429)

**Germ cell mutagenicity**

Test Type: Ames test  
Test system: S. typhimurium  
Result: negative  
Remarks: (IUCLID)  
Test Type: In vitro mammalian cell gene mutation test  
Test system: Chinese hamster ovary cells  
Result: negative  
Test Type: sister chromatid exchange assay  
Test system: Chinese hamster ovary cells  
Result: negative  
Test Type: unscheduled DNA synthesis assay  
Test system: rat hepatocytes  
Result: negative  
Test Type: Chromosome aberration test in vitro  
Test system: Chinese hamster ovary cells  
Result: negative

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

**Aspiration hazard**

No data available

**lauric acid**

**Acute toxicity**

LD50 Oral - Rat - male and female - > 5,000 mg/kg  
(OECD Test Guideline 401)  
LC50 Inhalation - Rat - male and female - 4 h - > 0.162 mg/l - vapour  
LD50 Dermal - Rabbit - male and female - > 2,000 mg/kg  
(OECD Test Guideline 434)  
Remarks: The value is given in analogy to the following substances: stearic acid

**Skin corrosion/irritation**

Skin - Rabbit  
Result: No skin irritation - 4 h  
(OECD Test Guideline 404)

**Serious eye damage/eye irritation**

Eyes - Rabbit  
Result: Causes serious eye damage.



(OECD Test Guideline 405)

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

Test Type: Chromosome aberration test in vitro

Test system: Chinese hamster lung cells

Result: negative

Remarks: The value is given in analogy to the following substances: Docosanoic acid

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Result: negative

Remarks: The value is given in analogy to the following substances: Decanoic acid

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

**Aspiration hazard**

No data available

**hexanoic acid**

**Acute toxicity**

LD50 Oral - Rat - 3,000 mg/kg

Remarks: (RTECS)

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract, After a latency period:, Inhalation may lead to the formation of oedemas in the respiratory tract.

LD50 Dermal - Rat - male and female - > 2,000 mg/kg

(OECD Test Guideline 402)

Remarks: The value is given in analogy to the following substances: sebacic acid

**Skin corrosion/irritation**

Skin - Rabbit

Result: Corrosive after 1 to 4 hours of exposure - 4 h

(OECD Test Guideline 404)

**Serious eye damage/eye irritation**

Eyes - Bovine cornea

Result: Corrosive - 10 min

(OECD Test Guideline 437)

Remarks: Causes serious eye damage.

Remarks: Lacrimal irritation due to vapours.

**Respiratory or skin sensitization**

No data available



### **Germ cell mutagenicity**

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Result: negative

### **Carcinogenicity**

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- NTP: No component 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**

Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract, After a latency period:, Inhalation may lead to the formation of oedemas in the respiratory tract.

### **Specific target organ toxicity - repeated exposure**

No data available

### **Aspiration hazard**

No data available

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## **SECTION 12. ECOLOGICAL INFORMATION**

### **Ecotoxicity**

#### **Components:**

#### **Octanoic acid:**

- Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 22 mg/l  
End point: mortality  
Exposure time: 96 h  
Test Type: static test  
Method: US-EPA
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 21 mg/l  
End point: Immobilization  
Exposure time: 48 h  
Test Type: static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 202  
GLP: yes

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- Toxicity to algae/aquatic plants : ErC50 (*Pseudokirchneriella subcapitata* (green algae)): 43.73 mg/l  
 Exposure time: 72 h  
 Test Type: static test  
 Analytical monitoring: yes  
 Method: OECD Test Guideline 201  
 GLP: yes
- Toxicity to fish (Chronic toxicity) : LC50 (*Danio rerio* (zebra fish)): 9.8 mg/l  
 End point: mortality  
 Exposure time: 28 d  
 Test Type: flow-through test  
 Analytical monitoring: yes  
 Remarks: (ECHA)
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : LC50 (*Daphnia magna* (Water flea)): 20 mg/l  
 End point: mortality  
 Exposure time: 21 d  
 Test Type: semi-static test  
 Analytical monitoring: yes  
 Method: OECD Test Guideline 211  
 GLP: yes
- Toxicity to microorganisms : EC10 (*Pseudomonas putida*): 912 mg/l  
 Exposure time: 18 h  
 Test Type: static test  
 Method: ISO 10712  
 GLP: yes

### Ecotoxicology Assessment

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

#### Decanoic acid:

- Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): > 20 mg/l  
 End point: Immobilization  
 Exposure time: 48 h  
 Test Type: static test  
 Analytical monitoring: yes  
 Method: OECD Test Guideline 202  
 GLP: yes
- Toxicity to algae/aquatic plants : ErC50 (*Pseudokirchneriella subcapitata* (green algae)): 15 mg/l  
 Exposure time: 72 h  
 Test Type: static test  
 Analytical monitoring: yes  
 Method: OECD Test Guideline 201  
 GLP: yes



NOEC (Pseudokirchneriella subcapitata (green algae)):  
3.2 mg/l  
End point: Growth inhibition  
Exposure time: 72 h  
Test Type: static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 201  
GLP: yes

Toxicity to fish (Chronic toxicity) : NOEC (Danio rerio (zebra fish)): 2 mg/l  
End point: mortality  
Exposure time: 28 d  
Test Type: flow-through test  
Analytical monitoring: yes  
Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.2 mg/l  
End point: reproduction rate  
Exposure time: 21 d  
Test Type: semi-static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 211  
GLP: yes

**glycerine:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 54,000 mg/l  
End point: mortality  
Exposure time: 96 h  
Test Type: static test  
Remarks: (ECHA)

**lauric acid:**

Toxicity to fish : LC50 (Oryzias latipes (Orange-red killifish)): 5 mg/l  
End point: mortality  
Exposure time: 96 h  
Test Type: semi-static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 203  
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 3.6 mg/l  
End point: Immobilization  
Exposure time: 48 h  
Test Type: semi-static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 202  
GLP: yes



- Toxicity to algae/aquatic plants : ErC50 (*Pseudokirchneriella subcapitata*): > 7.6 mg/l  
 Exposure time: 72 h  
 Test Type: static test  
 Analytical monitoring: yes  
 Method: OECD Test Guideline 201  
 GLP: yes  
 Remarks: (above the solubility limit in the test medium)
- Toxicity to fish (Chronic toxicity) : LC50 (*Danio rerio* (zebra fish)): 9.8 mg/l  
 End point: mortality  
 Exposure time: 28 d  
 Test Type: flow-through test  
 Analytical monitoring: yes  
 Remarks: (ECHA)
- Toxicity to microorganisms : EC10 (*Pseudomonas putida*): > 1,000 mg/l  
 Exposure time: 30 min  
 Test Type: static test  
 Method: OECD Test Guideline 209

### Ecotoxicology Assessment

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

#### hexanoic acid:

- Toxicity to fish : LC50 (*Pimephales promelas* (fathead minnow)): 88 mg/l  
 End point: mortality  
 Exposure time: 96 h  
 Test Type: static test  
 Remarks: (ECHA)
- Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 72 mg/l  
 End point: Immobilization  
 Exposure time: 48 h  
 Test Type: semi-static test  
 Analytical monitoring: yes  
 Method: OECD Test Guideline 202  
 GLP: yes  
 Remarks: The value is given in analogy to the following substances:  
 The value is given in analogy to the following substances: heptanoic acid; oenanthic acid
- Toxicity to algae/aquatic plants : ErC50 (*Pseudokirchneriella subcapitata*): 56.4 mg/l  
 Exposure time: 72 h  
 Test Type: static test  
 Analytical monitoring: yes



Method: OECD Test Guideline 201

GLP: yes

Remarks: The value is given in analogy to the following substances:

The value is given in analogy to the following substances: heptanoic acid; oenanthic acid

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 17.9 mg/l  
Exposure time: 21 d  
Test Type: semi-static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 211  
GLP: yes  
Remarks: The value is given in analogy to the following substances:  
The value is given in analogy to the following substances: heptanoic acid; oenanthic acid

### **Ecotoxicology Assessment**

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

### **Persistence and degradability**

#### **Components:**

#### **Octanoic acid:**

Biodegradability : aerobic  
Inoculum: Sewage sludge  
Concentration: 5 mg/l  
Result: Readily biodegradable.  
Biodegradation: > 72 %  
Exposure time: 30 d  
Method: OECD Test Guideline 301D

ThOD : 2,440 mg/g  
Remarks: (Lit.)

#### **Decanoic acid:**

Biodegradability : aerobic  
Inoculum: Sewage sludge  
Concentration: 5 mg/l  
Result: Readily biodegradable.  
Biodegradation: > 72 %  
Exposure time: 30 d  
Method: OECD Test Guideline 301D

#### **glycerine:**

Biodegradability : aerobic  
Inoculum: activated sludge



Concentration: 226 mg/l  
Result: Readily biodegradable.  
Biodegradation: 94 %  
Exposure time: 1 d  
Remarks: (ECHA)

Biochemical Oxygen Demand (BOD) : 870 mg/g  
Incubation time: 5 d  
Remarks: (External MSDS)

Chemical Oxygen Demand (COD) : 1,160 mg/g  
Remarks: (External MSDS)

ThOD : 1,217 mg/g  
Remarks: (Lit.)

BOD/ThOD : 71 %  
Remarks: (Lit.)

#### **lauric acid:**

Biodegradability : aerobic  
Inoculum: Sewage sludge  
Concentration: 2 mg/l  
Result: Readily biodegradable.  
Biodegradation: 86 %  
Exposure time: 30 d  
Method: OECD Test Guideline 301D

#### **hexanoic acid:**

Biodegradability : aerobic  
Inoculum: activated sludge, non-adapted  
Concentration: 49 mg/l  
Result: Readily biodegradable.  
Biodegradation: 84 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301D  
GLP: yes

BOD/ThOD : 44 %  
Remarks: (Lit.)

#### **Bioaccumulative potential**

##### **Components:**

##### **Octanoic acid:**

Bioaccumulation : Species: Danio rerio (zebra fish)  
Bioconcentration factor (BCF): 236 - 282  
Exposure time: 28 d  
Temperature: 70.7 °F / 21.5 °C



Concentration: 3.6 mg/l  
Method: OECD Test Guideline 305

Partition coefficient: n-octanol/water : log Pow: 3.05  
Remarks: Bioaccumulation is not expected.

**Decanoic acid:**

Partition coefficient: n-octanol/water : log Pow: 4.09  
Remarks: Potential bioaccumulation

**glycerine:**

Partition coefficient: n-octanol/water : log Pow: -1.75 (77 °F / 25 °C)  
pH: 7.4  
Method: OECD Test Guideline 107  
Remarks: Bioaccumulation is not expected.

**lauric acid:**

Bioaccumulation : Species: Danio rerio (zebra fish)  
Bioconcentration factor (BCF): 234 - 249  
Exposure time: 28 d  
Temperature: 70.7 °F / 21.5 °C  
Concentration: 2 mg/l

Partition coefficient: n-octanol/water : log Pow: 4.6  
Method: (experimental)  
Remarks: (Lit.)  
Potential bioaccumulation

**hexanoic acid:**

Partition coefficient: n-octanol/water : log Pow: 1.75 (77 °F / 25 °C)  
Remarks: Bioaccumulation is not expected.

**Mobility in soil**

No data available

**Other adverse effects**

**Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances  
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).



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## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

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## SECTION 14. TRANSPORT INFORMATION

### International Regulations

#### IATA-DGR

UN/ID No. : UN 1760  
Proper shipping name : Corrosive liquid, n.o.s.  
(Octanoic acid)  
Class : 8  
Packing group : III  
Labels : Class 8 - Corrosive substances  
Packing instruction (cargo : 856  
aircraft)  
Packing instruction : 852  
(passenger aircraft)

#### IMDG-Code

UN number : UN 1760  
Proper shipping name : CORROSIVE LIQUID, N.O.S.  
(Octanoic acid)  
Class : 8  
Packing group : III  
Labels : 8  
EmS Code : F-A, S-B  
Marine pollutant : no

#### Transport in bulk according to IMO instruments

Not applicable for product as supplied.

### National Regulations

#### 49 CFR Road

UN/ID/NA number : UN 1760  
Proper shipping name : Corrosive liquids, n.o.s.  
(Octanoic acid)  
Class : 8  
Packing group : III  
Labels : Class 8 - Corrosive substances  
ERG Code : 154  
Marine pollutant : no

Poison Inhalation Hazard : No



### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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## SECTION 15. REGULATORY INFORMATION

### CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Acute Health Hazard  
Chronic Health Hazard

**SARA 313** : 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.

### Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

glycerine	56-81-5	>= 5 - < 10 %
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### Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

### US State Regulations

#### Massachusetts Right To Know

glycerine	56-81-5
hexanoic acid	142-62-1



## Pennsylvania Right To Know

glycerine

56-81-5

## Maine Chemicals of High Concern

Product does not contain any listed chemicals

## Vermont Chemicals of High Concern

Product does not contain any listed chemicals

## Washington Chemicals of High Concern

Product does not contain any listed chemicals

## The components of this product are reported in the following inventories:

US TSCA : All substances listed as active on the TSCA inventory

### TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

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## SECTION 16. OTHER INFORMATION

### Full text of other abbreviations

OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants  
OSHA Z-1 / TWA : 8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand

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The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the US and Canada



Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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