

HC01-εCPL

ε-CAPROLACTONE

Revised 03-October-2017

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name	ε-Caprolactone
Catalog Number	HC01-εCPL
Brand	Fluoryx Labs
CAS Number	502-44-3

Relevant identified uses of the Substance or mixture and uses advised against

Identified uses:	Laboratory chemicals. Manufacture of substances.
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Details of the supplier of the safety data sheet

Company	Fluoryx Labs 3650 Research Way, #22 Carson City, NV 89706 USA +1 (510) 329-9149 (Telephone) +1 (510) 686-8799 (Fax) www.fluoryx.com
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Emergency call (ChemTel)

+01-813-248-0585 (International)
1-800-255-3924 (USA)

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Eye irritation (Category 2A), H319

GHS Label elements, including precautionary statements

Pictogram



Signal word

Warning

Hazard statement(s)

H319

Causes serious eye irritation.

Precautionary statement(s)

P264

P280

Wash skin thoroughly after handling.
Wear protective gloves/protective clothing/eye
protection/face protection.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several
minutes. Remove contact lenses, if present and easy

P337 + P313

to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Synonyms	6-Caprolactone monomer; 2-Oxepanone; 6-Hexanolactone
Formula:	C ₆ H ₁₀ O ₂
Molecular weight	114.14 g/mol
CAS number	502-44-3
EC number	207-938-1

Hazardous components

Component	Classification	Concentration
Hexan-6-olide	Eye Irrit. 2A; H319	≤100%

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

4. FIRST AID MEASURES

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
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	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
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

Indication of any immediate medical attention and special treatment needed - No data available

5. FIREFIGHTING MEASURES

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special protective equipment for fire-fighters	Wear self-contained breathing apparatus for fire fighting.
Hazardous combustion products	Hazardous decomposition products formed under fire conditions - carbon oxides.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.
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For personal protection see section 8.

Environmental precautions

Do not let product enter drains.

Methods for cleaning up

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

7. HANDLING AND STORAGE

Precautions for Safe Handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Normal measures for preventive fire protection.

Conditions for Safe Storage

Keep container tightly closed in a dry and well-ventilated place. Containers that are opened must be carefully resealed and kept upright to prevent leakage. Storage class (TRGS 510): Combustible liquids.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

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:

Safety glasses with side-shields conforming to EN166. 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: butyl-rubber

Minimum layer thickness: 0.3 mm

Break through time: 480 min

Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact:

Material: Nature latex/chloroprene

Minimum layer thickness: 0.6 mm

Break through time: 116 min

Material tested: Lapren® (KCL 706 / Aldrich Z677558, 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 CE 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

Impervious clothing. 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).

Control of environmental exposure

Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	Clear liquid
Color	Colorless

Safety Data

pH	4 - 5
Melting Point/Freezing Point	-2 °C
Boiling Point	241 °C @ 760 mm Hg
Flash Point	111 °C (closed cup)
Ignition Temperature	No data available
Auto-ignition Temperature	340 °C
Lower Explosion Limit	1.2 %
Upper Explosion Limit	9 %
Vapor Pressure	0.00081 kPa @ 25 °C
Density	1.07 g/cm ³
Water Solubility	100 %
Partition Coefficient (n-octanol/water)	0.32 log POW (@ 25 °C) OECD Test No. 117: Partition Coefficient (n-octanol/water), HPLC Method
Relative Vapor Density (Air = 1)	3.94
Odor	Bitter almond
Odor Threshold	No data available
Evaporation Rate	No data available
Oxidizing Properties	Not oxidizing
Viscosity	No data available

10. STABILITY AND REACTIVITY

Reactivity No data available

Chemical stability Stable under recommended storage conditions.

Possibility of hazardous reactions:	No data available.
Conditions to avoid	No data available.
Incompatible materials	Strong oxidizing agents. Strong bases.
Hazardous decomposition products	In combustion, emits toxic fumes including carbon monoxide and carbon dioxide.

11. TOXICOLOGICAL INFORMATION

Acute toxicity	Oral LD50 Rat, 4290 mg/kg. Inhalation LC50 No data available. Dermal LD50 Rabbit, male, 6400 mg/kg (OECD Test Guideline 402). Other information on acute toxicity No data available
Skin corrosion/irritation	Skin - Rabbit Result: No skin irritation (OECD Test Guideline 404)
Serious eye damage/eye irritation	Eyes - Rabbit Result: Irritating to eyes. (OECD Test Guideline 405)
Respiratory or skin sensitization	in vivo assay - Mouse Result: negative (OECD Test Guideline 429) Remarks: No data available
Germ cell mutagenicity	Chromosome aberration test in vitro Chinese hamster fibroblasts Result: negative
Carcinogenicity	<p>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.</p> <p>ACGIH No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.</p> <p>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.</p> <p>OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.</p>
Reproductive toxicity	No data available
Teratogenicity	No data available
Specific target organ toxicity (Globally Harmonized System)	
Single exposure	No data available
Repeated exposure	No data available
Aspiration hazard	No data available
Signs and Symptoms of Exposure:	No data available
Synergistic effects	No data available
Additional Information	RTECS: MO8400000

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

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish	LC50 - Poecilia reticulata (guppy) - 280 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 204 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	ErC50 - Desmodesmus subspicatus (green algae) - 2,616 mg/l - 72 h (OECD Test Guideline 201)

Persistence and degradability

No data available.

Bioaccumulative potential

No data available

Mobility in soil

No data available

PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

Other adverse effects

No data available.

13. DISPOSAL CONSIDERATIONS

Product

Offer non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORTATION INFORMATION

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

15. REGULATORY INFORMATION

TSCA Inventory

Listed

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 health hazard.

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

Hexan-6-olide
CAS-No. 502-44-3 Revision Date

New Jersey Right To Know Components

Hexan-6-olide
CAS-No. 502-44-3 Revision Date

California Prop. 65 Components

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

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Eye Irrit.	Eye irritation
H319	Causes serious eye irritation.

HMS Cassification

Health hazard	2
Flammability	1
Physical hazards	0

NFPA Rating

Health hazard	2
Fire	1
Reactivity hazard	0

Further Information

Not for drug, household, or other uses. The previous information is based upon our current knowledge and experience of our product and is not exhaustive. It applies to the product as defined by the specifications. In case of combinations or mixtures, one must confirm that no new hazards are likely to exist. In any case, the user is not exempt from observing all legal, administrative and regulatory procedures relating to the product, personal hygiene, and integrity of the work environment. Unless noted to the contrary, the technical information applies only to pure product.

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End of SDS