



Specialized in chemicals

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## 6-Hexanolactone

### Section 1: Chemical Product and Company Identification

**Molecular formula:** C<sub>6</sub>H<sub>10</sub>O<sub>2</sub>

**CAS Nr:** 502-44-3

**EINECS:** 207-938-1

**MOLECULAR WEIGHT:** 114.14

**Synonyms:** 6-Hexanolactone,6-Caprolactone monomer;6-Hexanalactone;6-Hexanolacetone

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### Section 2: Composition and Information on Ingredients

**Composition:**

Name	CAS #	% by Weight
6-Hexanolactone	502-44-3	99

### Section 3: Hazards Identification

Appearance: APHA: 15 max liquid.

**Warning!** Causes eye and skin irritation. May cause respiratory tract irritation.

**Target Organs:** Eyes, skin.

**Potential Health Effects**

**Eye:** Causes eye irritation.

**Skin:** Causes skin irritation. May be harmful if absorbed through the skin.

**Ingestion:** May cause irritation of the digestive tract. May be harmful if swallowed.

**Inhalation:** May cause respiratory tract irritation. May be harmful if inhaled.

**Chronic:** No information found.

### Section 4: First Aid Measures

**Eyes:**

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Skin:**

Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

**Ingestion:**

Do not induce vomiting. Get medical aid if irritation or symptoms occur.

**Inhalation:**

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

**Notes to Physician:**

Treat symptomatically and supportively.

**Section 5: Fire and Explosion Data**

**General Information:**

As in any fire, wear a self-contained breathing apparatus in pressuredemand, MSHA/NIOSH (approved or equivalent), and full protective gear.

**Extinguishing Media:**

Use water spray, dry chemical, carbon dioxide, or appropriate foam.

**Flash Point:** 109 deg C ( 228.20 deg F)

**Autoignition Temperature:** 200 deg C ( 392.00 deg F)

**Explosion Limits, Lower:**Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 2; Flammability: 1; Instability: 0

**Section 6: Accidental Release Measures**

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:**

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Provide ventilation. Do not let this chemical enter the environment.

**Section 7: Handling and Storage**

**Handling:**

Use with adequate ventilation. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale.

**Storage:**

Store in a cool, dry place. Store in a tightly closed container.

**Section 8: Exposure Controls/Personal Protection**

**Engineering Controls:**

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

**OSHA Vacated PELs:**

Epsilon-Caprolactone monomer: No OSHA Vacated PELs are listed for this chemical.

**Personal Protective Equipment**

**Eyes:**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:**

Wear appropriate protective gloves to prevent skin exposure.

**Clothing:**

Wear appropriate protective clothing to prevent skin exposure.

**Respirators:**

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

**Section 9: Physical and Chemical Properties**

**Physical State:** Liquid

**Appearance:** APHA: 15 max

**Odor:** ketone odor

**pH:** Not available.

**Vapor Pressure:** 0.01 mm Hg @ 20 deg C

**Vapor Density:** 3.9 (air=1)

**Evaporation Rate:**Not available.

**Viscosity:** Not available.

**Boiling Point:** 235.3 - 97.4 deg C

**Freezing/Melting Point:**-1 deg C

**Decomposition Temperature:**Not available.

**Solubility:** > 1000 mg/L

**Specific Gravity/Density:**1.030

**Molecular Formula:**C6H10O2

**Molecular Weight:**114.14

**Section 10: Stability and Reactivity Data**

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Incompatible materials, excess heat.

**Incompatibilities with Other Materials:** Strong oxidizing agents, Lewis acids, nitric acid, peroxides, strong acids, alkalis, polymerization catalysts.

**Hazardous Decomposition Products:** Carbon monoxide, carbon monoxide, carbon dioxide.

**Hazardous Polymerization:** Has not been reported

### Section 11: Toxicological Information

**RTECS#:**

**CAS#** 502-44-3: MO8400000

**LD50/LC50:**

CAS# 502-44-3:

Oral, rat: LD50 = 4290 mg/kg;

Skin, rabbit: LD50 = 5990 uL/kg;

**Carcinogenicity:**

CAS# 502-44-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No information available.

**Teratogenicity:** No information available.

**Reproductive Effects:** No information available.

**Mutagenicity:** No information available.

**Neurotoxicity:** No information available.

**Other Studies:**

### Section 12: Ecological Information

**Ecotoxicity:**

No data available. Estimated Koc value = 109.1. This value suggests that epsilon-Caprolactone will show high mobility in soil. Estimated BCF value = 4.94. This value indicates that bioconcentration of this product in aquatic organisms and sediment should not be important. Epsilon-Caprolactone exists in the vapor phase in the ambient atmosphere and will be degraded slowly by the reaction with photochemically produced hydroxyl radicals.

**Environmental:** No information available.

**Physical:** No information available.

**Other:** Do not empty into drains.

### Section 13: Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

### Section 14: Transport Information

Not regulated

### Section 15: Other Regulatory Information

## **US FEDERAL**

### **TSCA**

CAS# 502-44-3 is listed on the TSCA inventory.

### **Health & Safety Reporting List**

None of the chemicals are on the Health & Safety Reporting List.

### **Chemical Test Rules**

None of the chemicals in this product are under a Chemical Test Rule.

### **Section 12b**

None of the chemicals are listed under TSCA Section 12b.

### **TSCA Significant New Use Rule**

None of the chemicals in this material have a SNUR under TSCA.

### **CERCLA Hazardous Substances and corresponding RQs**

None of the chemicals in this material have an RQ.

### **SARA Section 302 Extremely Hazardous Substances**

None of the chemicals in this product have a TPQ.

**Section 313** No chemicals are reportable under Section 313.

### **Clean Air Act:**

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

### **Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

### **OSHA:**

None of the chemicals in this product are considered highly hazardous by OSHA.

### **STATE**

CAS# 502-44-3 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

### **California Prop 65**

California No Significant Risk Level: None of the chemicals in this product are listed.

## **European/International Regulations**

### **European Labeling in Accordance with EC Directives**

#### **Hazard Symbols:**

XI

#### **Risk Phrases:**

R 36/38 Irritating to eyes and skin.

#### **Safety Phrases:**

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 37/39 Wear suitable gloves and eye/face protection.

### **WGK (Water Danger/Protection)**

CAS# 502-44-3: No information available.

### **Canada - DSL/NDSL**

CAS# 502-44-3 is listed on Canada's DSL List.

**Canada - WHMIS**

This product has a WHMIS classification of D2B.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

**Canadian Ingredient Disclosure List**

CAS# 502-44-3 is listed on the Canadian Ingredient Disclosure List.

**Section 16: Other Information**

**References:** Not available.

**Other Special Considerations:** Not available.

**Created:** 10/10/2005 12:10 AM

**Last Updated:** 05/21/2016 12:00 PM

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