

**Material Safety Data Sheet**  
**4-Fluoro-1,3-dioxolan-2-one**

**Section 1 -chemical product and company Identification**

**MSDS Name:** 4-Fluoro-1,3-dioxolan-2-one  
**Catalog Numbers:** 10165  
**Synonyms:** Fluoroethylene carbonate  
**Company Identification:** China Langchem Inc.  
**For information in China:** Tel:+86-021-58956006  
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Web: <http://www.langchem.com>

**Section 2 -Composition,information on ingredients**

CAS#	Chemical Name:	Purity	MDL#
114435-02-8	4-Fluoro-1,3-dioxolan-2-one	99%	Not available

**Hazard Symbols:** Not available

**Risk Phrases:** Not available

**Section 3 - Hazards Identification**

**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:** Causes respiratory tract irritation. May be harmful if inhaled.

**Section 4- First Aid Measures**

**Eyes:** 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. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

- Ingestion:** Get medical aid. Wash mouth out with water.
- 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.
- Notes to Physician:** Treat symptomatically and supportively.

## Section 5- Fire Fighting Measures

- General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.
- Extinguishing Media:** Use water spray, dry chemical, carbon dioxide, or chemical foam.

## Section 6- Accidental Release Measures

- General Information:** Use proper personal protective equipment as indicated in Section 8.
- Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container.

## Section 7- Handling and storage

- Handling:** Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes.
- Storage:** Store in a cool, dry place and nitrogen protection. Do not store in direct sunlight. 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.

### Personal Protective Equipment

- Eyes:** Wear chemical splash goggles.
- Skin:** Wear appropriate protective gloves to prevent skin exposure.
- Clothing:** Wear appropriate protective clothing to prevent skin exposure.
- Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

## Section 9-Physical and chemical properties

<b>Physical State:</b>	Liquid
<b>Color:</b>	Colorless,clear
<b>Odor:</b>	Not available
<b>Boiling Point:</b>	200 °C
<b>Freezing/Melting Point:</b>	19~20°C
<b>Flash Point:</b>	Not available
<b>Density(25°C):</b>	1.454g/cm <sup>3</sup>
<b>Solubility in water:</b>	Not available
<b>Molecular Formula:</b>	C3H3FO3
<b>Molecular Weight:</b>	106.05

## Section 10-Stability and Reactivity

- Chemical Stability:** Not available.
- Conditions to Avoid:** Incompatible materials.
- Incompatibilities with Other Materials:** Strong oxidizing agents,moisture.
- Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide, hydrogen fluoride.
- Hazardous Polymerization:** Has not been reported.

## Section 11-Toxicological information

- RTECS#:** CAS# 114435-02-8: None listed
- LD50/LC50:** RTECS: Not available.

**Carcinogenicity:** 4-Fluoro-1,3-dioxolan-2-one- Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

**Other:** The toxicological properties have not been fully investigated.

## Section 12-Ecological information

Not available

## Section 13-Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

## Section 14-Transport information

**ADR/RID**

Not regulated.

**IMDG**

Not regulated.

**IATA**

Not regulated.

## Section 15-Regulatory information

### European/International Regulations

#### European Labeling in Accordance with EC Directives

**Hazard Symbols:** Not available.

**Risk Phrases:**

Not available.

**Safety Phrases:**

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

S 36 Wear suitable protective clothing.

#### WGK (Water Danger/Protection)

CAS# 114435-02-8: Not available

Canada

CAS# 114435-02-8: Not available

#### US Federal

TSCA

CAS#114435-02-8 is not listed on the TSCA Inventory. It is for research

and development use only.

## Section 16- Other information

**MSDS Creation Date:** 2009-12-28

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