

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name : (R)-(+)-3,3,3-Trifluoro-1,2-epoxypropane

## 2. HAZARDS IDENTIFICATION

### Classification of the substance or mixture

According to Regulation (EC) No1272/2008  
Flammable liquids (Category 1)  
Eye irritation (Category 2)

According to European Directive 67/548/EEC as amended.  
Extremely flammable.

### Label elements

Pictogram



Signal word : Danger

Hazard statement(s)  
H224 : Extremely flammable liquid and vapour.  
H319 : Causes serious eye irritation.

Precautionary statement(s)  
P210 : Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P305 + P351 + P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Hazard symbol(s)  
F+ : Extremely flammable

R-phrases(s)  
R12 : Extremely flammable.

S-phrases(s)  
S3 : Keep in a cool place.

Other hazards - none

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : (R)-(+)-2-Trifluoromethyloxirane

Formula : C3H3F3O

Molecular Weight : 112,05 g/mol

CAS-No.	EC-No.	Classification	Concentration
<b>R-(+)-3,3,3-Trifluoro-1,2-epoxypropane</b> 143142-90-9	-	Flam. Liq. 1; H224 F+, R12	-

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.

### 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

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## 5. FIRE-FIGHTING MEASURES

### Suitable extinguishing media

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

### Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

### Further information

Use water spray to cool unopened containers.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

### Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

## 7. HANDLING AND STORAGE

### Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

### Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature: 2 - 8 °C

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (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).

#### Hand 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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

#### Eye protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin and body protection

Impervious clothing. Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form : liquid  
Colour : colourless

### Safety data

pH : no data available  
Melting point : no data available  
Boiling point : 25 - 32 °C  
Flash point : -26 °C  
Ignition temperature : no data available  
Lower explosion limit : no data available  
Upper explosion limit : no data available  
Density : 1,294 g/cm<sup>3</sup> at 25 °C  
Water solubility : no data available  
Partition coefficient: log Pow: 2,156  
n-octanol/water

## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

### Materials to avoid

Strong oxidizing agents

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen fluoride

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

no data available

### Skin corrosion/irritation

no data available

### Serious eye damage/eye irritation

no data available

### 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.

### 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

### Potential health effects

**Inhalation** : May be harmful if inhaled. May cause respiratory tract irritation.  
**Ingestion** : May be harmful if swallowed.  
**Skin** : May be harmful if absorbed through skin. May cause skin irritation.  
**Eyes** : Causes eye irritation.

### Additional Information

RTECS: Not available

## 12. ECOLOGICAL INFORMATION

### Toxicity

no data available

### Persistence and degradability

no data available

### Bioaccumulative potential

no data available

### Mobility in soil

no data available

### PBT and vPvB assessment

no data available

### Other adverse effects

no data available

## 13. DISPOSAL CONSIDERATIONS

### Product

Burn in a chemical incinerator equipped with an after-burner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and 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. TRANSPORT INFORMATION

### ADR/RID

UN-Number: 1993 Class: 3 Packing group: I  
Proper shipping name: FLAMMABLE LIQUID, N.O.S. (R-(+)-3,3,3-Trifluoro-1,2-epoxypropane)

### IMDG

UN-Number: 1993 Class: 3 Packing group: I EMS-No: F-E, S-E  
Proper shipping name: FLAMMABLE LIQUID, N.O.S. (R-(+)-3,3,3-Trifluoro-1,2-epoxypropane)  
Marine pollutant: No

### IATA

UN-Number: 1993 Class: 3 Packing group: I  
Proper shipping name: Flammable liquid, n.o.s. (R-(+)-3,3,3-Trifluoro-1,2-epoxypropane)

## 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

## 16. OTHER INFORMATION

### Text of H-code(s) and R-phrases(s) mentioned in Section 3

Flam. Liq. : Flammable liquids  
H224 : Extremely flammable liquid and vapour.  
F+ : Extremely flammable  
R12 : Extremely flammable.

### Further information

For R&D use only. Not for drug, household or other uses.

WARRANTY:

The above information is believed to be correct but does not purport to be all warranty and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Lookchem shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

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