



## Safety Data Sheet

### 1. Identification of the substance/mixture and of the company/undertaking

**Product identifier:**

Product name: Methyl 2,2,2-trifluoroethyl carbonate

SDS No. : 8049E-1

**Details of the supplier of the safety data sheet**

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.

Address: 3-1, Honmachibashi, Chuo-ku, Osaka, JAPAN

Division: Safety Management Dept. of Chemicals

Telephone number: +81-6-6946-8061

FAX: +81-6-6946-1607

e-mail address: kagakuhinanzenkanri@kishida.co.jp

### 2. Hazards identification

**GHS classification and label elements of the product****Classification of the substance or mixture****PHYSICAL AND CHEMICAL HAZARDS**

Flammable liquids: Category 3

**HEALTH HAZARDS**

Skin corrosion/irritation: Category 2

Serious eye damage/eye irritation: Category 2

Specific target organ toxicity – single exposure: Category 3 (Respiratory tract irritation)

**Label elements**

Signal word: Warning

**HAZARD STATEMENT**

Flammable liquid and vapor

Causes skin irritation

Causes serious eye irritation

May cause respiratory irritation

**PRECAUTIONARY STATEMENT****Prevention**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Keep container tightly closed.

Ground and bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use non-sparking tools.

Take action to prevent static discharges.

Avoid breathing dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

Wash contaminated parts thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

**Response**

In case of fire: Use appropriate media other than water to extinguish.

Call a POISON CENTER/doctor/physician if you feel unwell.



IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF ON SKIN: Wash with plenty of soap and water.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

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

If eye irritation persists: Get medical advice/attention.

#### Storage

Store in a well-ventilated place. Keep container tightly closed. Keep cool.

#### Disposal

Dispose of contents/container in accordance with local/national regulation.

#### Specific Physical and Chemical hazards

Flammable liquid. Vapor/air mixture may explode.

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### 3. Composition/information on ingredients

#### Mixture/Substance selection:

##### Substance

Ingredient name:Methyl 2,2,2-trifluoroethyl carbonate

Content (%):99(min)

Chemical formula:C4H5F3O3

CAS No.:156783-95-8

MW:158.08

Note : The figures shown above are not the specifications of the product.

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### 4. First-aid measures

#### Descriptions of first-aid measures

##### General measures

Call a POISON CENTER/doctor/physician if you feel unwell.

##### IF INHALED

Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER/doctor/physician if you feel unwell.

##### IF ON SKIN (or hair)

Take off immediately all contaminated clothing. Rinse skin with water or shower.

Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical advice/attention.

##### IF IN EYES

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

##### IF SWALLOWED

Rinse mouth.

Call a POISON CENTER/doctor/physician if you feel unwell.

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### 5. Fire-fighting measures

#### Extinguishing media

##### Suitable extinguishing media

In case of fire, use foam, dry powder, CO2 to extinguish.

##### Unsuitable extinguishing media

Indoor firefighting equipment or outdoor firefighting equipment



Sprinkler equipment  
Dry-powder firefighting equipment – except for phosphate etc.,hydrogen carbonate etc.  
Straight stream water extinguisher  
Water mist extinguisher  
Reinforcing liquid jet extinguisher  
Dry-powder extinguisher – except for phosphate etc.,hydrogen carbonate etc.  
Bucket of water or tank of water

#### Advice for firefighters

##### Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

##### Special protective equipment and precautions for fire-fighters

Wear fire resistant or flame retardant clothing.

Wear protective gloves/protective clothing/eye protection/face protection.

Firefighters should wear self-contained breathing apparatus with full face piece operated positive pressure mode.

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## 6. Accidental release measures

### Personnel precautions, protective equipment and emergency procedures

Ventilate area until material pick up is complete.

Wear proper protective equipment.

### Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

### Methods and materials for containment and cleaning up

Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

### Preventive measures for secondary accident

Collect spillage.

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## 7. Handling and storage

### Precautions for safe handling

#### Preventive measures

(Exposure Control for handling personnel)

Avoid breathing dust/fume/gas/mist/vapors/spray.

(Protective measures against fire and explosion)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Ground and bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use non-sparking tools.

Take action to prevent static discharges.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

#### Safety Measures

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

When using do not eat, drink or smoke.

#### Any incompatibilities

See "10.Stability and Reactivity"

#### Advice on general occupational hygiene



Wash contaminated parts thoroughly after handling.  
Take off contaminated clothing and wash it before reuse.

**Storage**

Conditions for safe storage

Keep container tightly closed.

Store in a cool, dry place. Do not store in direct sunlight.

Container and packaging materials for safe handling

Glass

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**8. Exposure controls/personal protection**

Control parameters

Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Eye wash station should be available.

Washing facilities should be available.

Individual protection measures

Respiratory protection

Wear respiratory protection.

Hand protection

Wear protective gloves.

Eye protection

Wear eye/face protection.

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**9. Physical and Chemical Properties**

Information on basic physical and chemical properties

Physical state: Liquid (20°C)

Color: Colorless to light yellow, clear

Odor: Ether-like odor

Melting point/Freezing point data is not available.

Boiling point or initial boiling point data is not available.

Boiling range data is not available.

Flammability (gases, liquids and solids) data is not available.

Lower and upper explosion limit/flammability limit data is not available.

Flash point: (Methyl 2,2,2-trifluoroethyl carbonate)35.0°C

Auto-ignition temperature data is not available.

Decomposition temperature data is not available.

pH data is not available.

Kinematic viscosity data is not available.

Solubility:

Solubility in water: Insoluble

n-Octanol/water partition coefficient data is not available.

Vapor pressure data is not available.

Density and/or relative density: 1.33 g/cm<sup>3</sup> (20°C)

Relative vapor density (Air=1) data is not available.

Particle characteristics data is not available.



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## 10. Stability and Reactivity

### Reactivity

Not available.

### Chemical stability

Stable under normal storage/handling conditions.

### Possibility of hazardous reactions

Not available.

### Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

### Incompatible materials

Strong oxidizing agents

### Hazardous decomposition products

Carbon oxides, Hydrogen fluoride

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## 11. Toxicological Information

### Information on toxicological effects

Acute toxicity data is not available.

### Irritant properties

#### Skin corrosion/irritation

[Company proprietary data]

(Methyl 2,2,2-trifluoroethyl carbonate)

Category 2

#### Serious eye damage/irritation

[Company proprietary data]

(Methyl 2,2,2-trifluoroethyl carbonate)

Category 2

Allergenic and sensitizing effects data is not available.

Mutagenic effects data is not available.

Carcinogenic effects data is not available.

Reproductive toxicity data is not available.

### STOT

#### STOT-single exposure

[cat.3 (resp. irrit.)]

[Company proprietary data]

(Methyl 2,2,2-trifluoroethyl carbonate)

Respiratory tract irritation

STOT-repeated exposure data is not available.

Aspiration hazard data is not available.

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## 12. Ecological Information

### Ecotoxicity

Ecotoxicity data is not available.

### Persistence and degradability

Persistence and degradability data is not available.

### Bioaccumulative potential

Bioaccumulative potential data is not available.

### Mobility in soil

Mobility in soil data is not available.

### Other adverse effects

Ozone depleting chemical data is not available.



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**13. Disposal considerations**

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

**Waste treatment methods**

Dispose of contents/container in accordance with local/national regulation.

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**14. Transport Information**

UN No. or ID No.: 1993

UN Proper Shipping Name :

FLAMMABLE LIQUID, N.O.S.

Class or division (Transport hazard class) : 3

Packing group : III

ERG GUIDE No.: 128

Special provisions No.: 223; 274

**IMDG Code (International Maritime Dangerous Goods Regulations)**

UN No.: 1993

Proper Shipping Name :

FLAMMABLE LIQUID, N.O.S.

Class or division : 3

Packing group : III

Special provisions No.: 223; 274; 955

**IATA Dangerous Goods Regulations**

UN No.: 1993

Proper Shipping Name :

FLAMMABLE LIQUID, N.O.S.

Class or division : 3

Hazard labels : Flamm.liquid

Packing group : III

Special provisions No.: A3

**Environmental hazards**

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : no

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**15. Regulatory Information****Other regulatory information**

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

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**16. Other information****GHS classification and labelling**

Flam. Liq. 3: H226 Flammable liquid and vapor

Skin Irrit. 2: H315 Causes skin irritation

Eye Irrit. 2: H319 Causes serious eye irritation

STOT SE 3: H335 May cause respiratory irritation

**Reference Book**

Globally Harmonized System of classification and labelling of chemicals, UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 21th edit., 2019 UN

IMDG Code, 2018 Edition (Incorporating Amendment 39-18)

IATA Dangerous Goods Regulations (62nd Edition) 2021

2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)



2021 TLVs and BEIs. (ACGIH)

Supplier's data/information

General Disclaimer

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Japan official data (NITE published in 2019).