



## Safety Data Sheet

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

**Product identifier:**

Product name: Vinylene carbonate

SDS No. : 8492E-4

**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 4

**HEALTH HAZARDS**

Acute toxicity (Oral): Category 4

Acute toxicity (Dermal): Category 3

Skin corrosion/irritation: Category 2

Serious eye damage/eye irritation: Category 1

Skin sensitization: Category 1

Specific target organ toxicity – repeated exposure: Category 2(liver)

**ENVIRONMENT HAZARDS**

Hazardous to the aquatic environment (Acute): Category 2

Hazardous to the aquatic environment (Long-term): Category 2

**Label elements**

Signal word: Danger

**HAZARD STATEMENT**

Combustible liquid

Harmful if swallowed

Toxic in contact with skin

Causes skin irritation

Causes serious eye damage

May cause an allergic skin reaction

May cause damage to organs through prolonged or repeated exposure(liver)

Toxic to aquatic life with long lasting effects

**PRECAUTIONARY STATEMENT****Prevention**

Avoid release to the environment.

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

Do not breathe dust/fume/gas/mist/vapors/spray.



Wash contaminated parts thoroughly after handling.  
Contaminated work clothing should not be allowed out of the workplace.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Do not eat, drink or smoke when using this product.

**Response**

In case of fire: Use appropriate media other than water to extinguish.  
Collect spillage.  
Get medical advice/attention if you feel unwell.  
Call a POISON CENTER/doctor/physician if you feel unwell.  
IF ON SKIN: Wash with plenty of soap and water.  
If skin irritation or rash occurs: Get medical advice/attention.  
Take off immediately all 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 SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.  
IF SWALLOWED: Rinse mouth.

**Storage**

Store in a well-ventilated place.

**Disposal**

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

**Specific Physical and Chemical hazards**

Heating may cause fire.

---

**3. Composition/information on ingredients****Mixture/Substance selection:****Substance**

Ingredient name:Vinylene carbonate  
Content (%):99(min)  
Chemical formula:C<sub>3</sub>H<sub>2</sub>O<sub>3</sub>  
Chemicals No, Japan:5-6636,5-6744  
CAS No.:872-36-6  
MW:86.05  
ECNO:212-825-5

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

**Stabilizing additives**

BHT 70~110ppm

---

**4. First-aid measures****Descriptions of first-aid measures****General measures**

Get medical advice/attention 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.

---

**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.

---

**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.

---

**7. Handling and storage****Precautions for safe handling****Preventive measures**

(Exposure Control for handling personnel)

Do not breathe 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.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

**Safety Measures**

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.

Do not eat, drink or smoke when using this product.

Contaminated work clothing should not be allowed out of the workplace.

Take off immediately all 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

Stainless steel

---

**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.

---

**9. Physical and Chemical Properties****Information on basic physical and chemical properties**

Physical state: Liquid (20°C)

Color: Colorless to yellowish, clear

Odor: Characteristic odor

Melting point/Freezing point: 19 through 22°C

Boiling point or initial boiling point: (Vinylene carbonate)162 through 168°C

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: (Vinylene carbonate)80 through 83°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: 1.36 g/cm<sup>3</sup> (20°C)

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

Particle characteristics data is not available.

---

## 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 acids, Strong bases, Strong oxidizing agents, Strong reducing agents

### Hazardous decomposition products

Carbon oxides

---

## 11. Toxicological Information

### Information on toxicological effects

#### Acute toxicity

##### Acute toxicity (Oral)

[Company proprietary data]

(Vinylene carbonate)

rat LD50=300-500mg/kg

##### Acute toxicity (Dermal)

[Company proprietary data]

(Vinylene carbonate)

Category 3

#### Irritant properties

##### Skin corrosion/irritation

[Company proprietary data]

(Vinylene carbonate)

Category 2

##### Serious eye damage/irritation

[Company proprietary data]

(Vinylene carbonate)

Category 1

#### Sensitization

##### Skin sensitization

[Company proprietary data]

(Vinylene carbonate)

Category 1

Mutagenic effects data is not available.

Carcinogenic effects data is not available.

Reproductive toxicity data is not available.

#### STOT

STOT-single exposure data is not available.

STOT-repeated exposure

[cat.2]

[Company proprietary data]



(Vinylene carbonate)

liver

Aspiration hazard data is not available.

Information on other hazards

May cause lung disorders by massive inhalation of powdered substance.

-e.g. fibrosis of lung tissue, cough, sputum, breath shortness, dyspnea, decline of lung function, interstitial lung disease, pneumothorax

---

## 12. Ecological Information

Ecotoxicity

Aquatic toxicity

Toxic to aquatic life with long lasting effects

Hazardous to the aquatic environment (Acute)

[Company proprietary data]

(Vinylene carbonate)

Crustacea (Daphnia) EC50=4.9 mg/L/48hr

Hazardous to the aquatic environment (Long-term)

[Company proprietary data]

(Vinylene carbonate)

Category 2

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.

---

## 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

Avoid release to the environment.

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

---

## 14. Transport Information

UN No. or ID No.: 2810

UN Proper Shipping Name :

TOXIC LIQUID, ORGANIC, N.O.S.

Class or division (Transport hazard class) : 6.1

Packing group : III

ERG GUIDE No.: 153

Special provisions No.: 223; 274

IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 2810

Proper Shipping Name :

TOXIC LIQUID, ORGANIC, N.O.S.

Class or division : 6.1

Packing group : III

Special provisions No.: 223; 274

**IATA Dangerous Goods Regulations**

UN No.: 2810  
Proper Shipping Name :  
TOXIC LIQUID, ORGANIC, N.O.S.  
Class or division : 6.1  
Hazard labels : Toxic  
Packing group : III  
Special provisions No.: A3; A4; A137

**Environmental hazards**

MARPOL Annex III – Prevention of pollution by harmful substances  
Marine pollutants (yes/no) : yes  
MARPOL Annex V – Prevention of pollution by garbage discharge  
Hazardous to the aquatic environment – long-term hazard: cat.1, 2  
Vinylene carbonate

---

**15. Regulatory Information**

Safety, health and environmental regulations/legislation specific for the substance or mixture

Chemicals listed in TSCA Inventory

Vinylene carbonate

Other regulatory information

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

---

**16. Other information**

GHS classification and labelling

Flam. Liq. 4: H227 Combustible liquid  
Acute Tox. 4: H302 Harmful if swallowed  
Acute Tox. 3: H311 Toxic in contact with skin  
Skin Irrit. 2: H315 Causes skin irritation  
Eye Dam. 1: H318 Causes serious eye damage  
Skin Sens. 1: H317 May cause an allergic skin reaction  
STOT RE 2: H373 May cause damage to organs through prolonged or repeated exposure  
Aquatic Chronic 2: H411 Toxic to aquatic life with long lasting effects

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).