

Material Safety Data Sheet

1. Product and company identification

Product name : Ethylene carbonate
Name of manufacturer : KANTO CHEMICAL CO., INC.
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Name of section : Reagent division, catalog and products information section
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MSDS No. : 14086

2. Summary of danger and Hazard

GHS classification

Physical and chemical hazard

Flammable solids : Out of category

Pyrophoric solids : Out of category

Human health hazard

Acute toxicity(oral) : Out of category

Acute toxicity(dermal)

: Out of category

Skin corrosion • Irritation

: Category 2

Serious eye damage • Eye irritation

: Category 2A

Pictogram or symbol



Signal word : Warning

Hazard statement : Causes skin irritation
Causes serious eye irritation

Cautions

Safety measurements : Wear appropriate protective gloves, glasses, clothing, face shield, or mask.

Wash protective equipment thoroughly after use.

First-aid measures : If in eyes : Rinse cautiously with water for several minutes. Get medical treatment.

If on skin : Remove contaminated clothing and the substance. If skin irritation occurs, get medical treatment.

Wash hands thoroughly after handling.

3. Composition/Information on ingredients

Substance/Mixture : Substance

Chemical name or commercial name

Synonyms : 1,3-dioxolane-2-on
: 1,3-Dioxolan-2-one
Ingredients and composition : Ethylene carbonate min. 98.0%
Chemical formula : C3H4O3
CAS No. : 96-49-1
TSCA Inventory : Registered
EINECS No. : 2025100

4. First aid measures

Inhalation : Remove the victim to fresh air, and make him blow his nose and gargle.
Skin contact : Wash the affected areas under running water.
Eye contact : Wash the affected areas under running water.
Ingestion : Give the victim water or salt water and induce vomiting. If necessary, get medical attention.

5. Fire fighting measures

Extinguishing media : Water, dry chemical powder, carbon dioxide, dry sand, foam
Prohibited extinguishing media : None
Particular fire fighting : Move containers from fire area if it can be done without risk, if not possible, apply water from a safe distance to cool and protect surrounding area.
Protection for firefighters : Firefighters should wear protective equipment.

6. Accidental release measures

Cautions for personnel : Wear proper equipment and avoid contact with skin and inhalation of dust. Keep away personnel except for authorized ones from spillage area by stretching ropes.
Cautions for environment : Attention should be given not to cause damage to the environment by flowing of spillage to rivers. In case of the dilution of copious water, do not cause damage to the environment by untreated wastewater.
Removal measure : Sweep up in a chemical waste container. Flush residual area with copious amounts of water.

7. Cautions of handling and storage

Handling

Engineering measures : If necessary, wear proper protective equipment not to contact with skin or inhale the dust.
Cautions for safety handling : Handle the chemical not to generate aerosol or dust.

Storage

Adequate storage condition : Keep away from strong oxidizing substances.
Store in a dark, cool place and tightly closed.

Safety adequate container materials

: Glass, polyethylene, polypropylene

8. Exposure control/Personal protection

Engineering measures : Use only with adequate ventilation and in closed systems.

Control parameters

ACGIH(2009) : Not established

Protective equipment

Respiration protective equipment

: If necessary, wear dust mask

Hands protective equipment

: Impervious protective gloves

Eyes protective equipment

: Safety goggles

9. Physical and chemical properties

Appearance : Crystal

Color : White

Odor : Odorless

pH : 7(200g/l, 20°C)

Boiling point : 238°C

Melting point : 36.4°C

Flash point : 160°C

Auto-ignition point : 465°C

Explosion characteristics

Explosion limit : upper : 16.1vol% lower : 3.6vol%

Vapor pressure : 0.03hPa(36.4°C)

Vapor density : 3.0

Specific gravity : 1.32g/ml(25°C)

Solubility

Solubility in solvents : Water ; 17.6%(20°C)

Organic solvents : Freely soluble in acetone, benzene, chloroform, ethyl acetate.

Other data : Viscosity : 1.92cP(40°C)

10. Stability and reactivity

Stability : Stable under normal usage.

Reactivity : May react with strong oxidizing substances.

Incompatible conditions : Light, heat

Incompatible materials : Oxidizing substances

Hazardous decomposition products

: Carbon monoxide

11. Toxicological information

Acute toxicity : Oral : Out of category

Dermal : Out of category

Inhalation(vapor) : Not possible to classify because of insufficient data.

Inhalation(dust, mist) : Not possible to classify because of insufficient data.

rat oral LD50=10g/kg

rabbit skin LD50>2000mg/kg

Skin corrosiveness : Causes skin irritation(category 2)

-(Empty)-

Irritation to skin, eyes : Causes serious eye irritation(category 2A)

-(Empty)-

Respiratory sensitization or Skin sensitization

: Respiratory sensitization : Not possible to classify because of insufficient data.

Skin sensitization : Not possible to classify because of insufficient data.

Mutagenicity : Not possible to classify because of insufficient data.

-(Empty)-

Carcinogenic effects : Not possible to classify because of insufficient data

Effects on the reproductive system

: Not possible to classify because of insufficient data.

Specific target organ systemic toxicity single exposure

: Not possible to classify because of insufficient data.

Specific target organ systemic toxicity repeated exposure

: Not possible to classify because of insufficient data.

Aspiration hazard

: Not possible to classify because of insufficient data.

12. Ecological information

Ecotoxicity

Fish toxicity

: Acute aquatic toxicity : Not possible to classify because of insufficient data.

Chronic aquatic toxicity : Not possible to classify because of insufficient data.

Rediualbility and degradability

: High biodegradability

64.1% by BOD

Ecorediualbility

: Not available

13. Disposal consideration

Residual disposal

: Mixed with flammable organic solvents and burn in a chemical incinerator equipped with an afterburner and a scrubber. Or entrust approved waste disposal companies with the disposal.

Containers

: In case of disposal of empty bottles, dispose bottles after removing the content thoroughly.

14. Transport information

UN class

: Not applicable

15. Regulatory information



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

16. Other information

References

Dictionary of Organic Compounds, The society of Synthetic Organic Chemistry, Kodansha Ltd. (1985)

The information contained herein is based on several references and the present state of our knowledge. However the MSDS does not always cover all information about the product, handle the product carefully. The information is intended to ordinary usage, in case of particular handlings, conduct appropriate safety measurements. The information herein is only provision of information, and it does not represent a guarantee the properties of the product.