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Safety Data Sheet

1. Chemical product and company identification

Product name	:	Propylene carbonate

Company information

Name of manufacturer	:	KANTO CHEMICAL CO., INC.
Address	:	2-1, Nihonbashi, Muromachi 2-Chome, Chuo-Ku, Tokyo, 103-0022, JP
Name of section	:	Business Administration Department, Reagent Division
Telephone number	:	+81-3-6214-1090
Facsimile number	:	+81-3-3241-1047
Mail address	:	BC32@kanto.co.jp
Reference No	:	32455
Recommended use	:	For research use only
Restrictions on use	:	Seek expert judgment when using the product for applications other than those recommended.

2. Hazards identification

GHS classification

Health hazards	Serious eye damage/eye irritation	Category 2A

Hazard pictograms

Signal word	:	Warning
Hazard statements	:	Causes serious eye irritation

Precautionary statements

Prevention	:	Wash hands, forearms and face thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
Response	:	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.

3. Composition/information on ingredients

Distinction of substance or mixture	:	Substance
Synonyms	:	PC、4-Methyl-1,3-dioxolane-2-one

Chemical name	Concentration (%)	Formula	TSCA	EC-No.	CAS RN
Propylene carbonate	≥ 98	C4H6O3	Listed	203-572-1	108-32-7

4. First aid measures

First aid measures

First-aid measures after inhalation : Remove the victim to fresh air, and make him blow his nose and gargle.

First-aid measures after skin contact : Wash the affected areas under running water.

First-aid measures after eye contact : Wash the affected areas under running water for at least 15 minutes. If necessary, get medical treatment.

First-aid measures after ingestion : Give the victim water. If necessary, get medical attention.

Personal Protection in First Aid and Measures : Rescuers should wear proper protective equipment like rubber gloves, goggles.

5. Fire fighting measures

Suitable extinguishing media : Dry chemical powder, carbon dioxide, dry sand, foam

Unsuitable extinguishing media : Water spray

Firefighting instructions : 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.

Fight fire from windward.

Dry chemical powder, carbon dioxide or dry sand should be used for small fires. Foam extinguisher is effective for a large scale fire.

Personal protection (Emergency response) : Firefighters should wear protective equipment.

6. Accidental release measures

Personal Precautions, Protective Equipment and Emergency Procedures

General measures : Wear proper protective equipment and avoid contact with skin and inhalation of vapor. Conduct operations from upwind and evacuate people downwind. Keep away personnel except for authorized ones from spillage area by stretching ropes.

Environmental precautions

Environmental precautions : Attention should be given to avoid damage to the environment by flowing of spillage to rivers.

Methods and Equipment for Containment and Cleaning up

For containment : Absorb spill with inert material (e.g, diatomaceous earth, sand) and flush spillage area with copious amounts of water.

Prevention Measures for Secondary Accidents : Remove nearby sources of ignition and prepare extinguishing media.

7. Handling and storage

Handling

Technical measures	:	Wear proper protective equipment to avoid contact with skin or inhalation of vapor. Pay attention to fire. Ventilate well at working places.
Precautions for safe handling	:	Avoid formation of vapor and aerosols. Do not allow contact with oxidizing substances.

Storage

Storage conditions	:	Store in a dark, cool place and tightly closed.
Material used in packaging/containers	:	Glass, fluorine resin, stainless steel. Do not use polyethylene, polypropylene.

8. Exposure controls / Personal protection equipment

ACGIH TWA	Not established

Appropriate engineering controls	:	Use with an enclosed system or a local exhaust ventilation.

Protective equipment

Respiratory protection	:	If necessary, wear chemical cartridge respirator with an organic vapor cartage
Hand protection	:	Impervious protective gloves
Eye protection	:	Safety goggles
Skin and body protection	:	Protective clothing, protective boots

9. Physical and chemical properties

Physical state	:	Liquid
Color	:	Colorless.
Odor	:	Odorless
pH	:	No data available
Melting point	:	-48.8 ° C
Freezing point	:	No data available
Boiling point	:	242 ° C
Flash point	:	135 ° C
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability	:	Flammable
Vapor pressure	:	6 Pa (25℃)
Relative density	:	No data available
Density	:	1.201 - 1.208 g/cm³ (20℃)
Relative gas density	:	No data available
Solubility	:	Organic solvents: Readily soluble in ethanol, ether, acetone, benzene.
Partition coefficient n-octanol/water (log Pow)	:	-0.41
Explosive limits (vol %)	:	No data available
Viscosity, kinematic	:	2.1 mm²/s (25℃)
Particle characteristics	:	No data available

10. Stability and reactivity

Reactivity	:	May react with oxidizing substances.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Stable under normal conditions of use.
Conditions to avoid	:	Light, heat.
Incompatible materials	:	Oxidizing substances.
Hazardous decomposition products	:	Carbon monoxide.

11. Toxicological information

Acute toxicity (oral)	:	No classification rat LD50≧29000 mg/kg
Acute toxicity (dermal)	:	No classification rabbit LD50>20000 mg/kg
Acute toxicity (inhalation)	:	No classification (gas) Classification not possible (vapor) Classification not possible (dust, mist)
Skin corrosion/irritation	:	No classification The classification is based on descriptions that the substance was found to be a slight irritant in rabbit tests and it caused no irritation in other rabbit tests (OECD Guidelines 404). Therefore, it was classified as "No classification".
Serious eye damage/irritation	:	Causes serious eye irritation The substance was found to be a moderate irritant in rabbit tests. In other rabbit tests (OECD Guidelines 405), its scores for corneal clouding and conjunctival erythema were 1.72 and 2.67, respectively, leading to the conclusion that the substance is irritating. Therefore, it was classified as category 2A.
Respiratory sensitization	:	Classification not possible
Skin sensitization	:	Classification not possible
Germ cell mutagenicity	:	Classification not possible Regarding in vitro tests, Ames tests and chromosomal aberration tests both yielded negative results.
Carcinogenicity	:	Classification not possible
Reproductive toxicity	:	Classification not possible
STOT-single exposure	:	Classification not possible
STOT-repeated exposure	:	Classification not possible
Aspiration hazard	:	Classification not possible

12. Ecological information

Ecotoxicity

Aquatic acute	:	No classification Scenedesmus subspicatus EC50＞900 mg/L/72h
Aquatic chronic	:	No classification

Persistence and degradability

Readily biodegradable
BOD : 79%

Bioaccumulative potential

Low bioconcentration
log Pow : -0.41

Mobility in soil

No additional information available

Hazardous to the ozone layer

Ozone : Classification not possible

13. Disposal considerations

Ecological waste information : Burn in a chemical incinerator equipped with an afterburner and a scrubber. Or entrust approved waste disposal companies with the disposal.

Contaminated container and packaging : In case of disposal of empty bottles, dispose bottles after removing the content thoroughly.

14. Transport information

International Regulations

Transport by sea(IMDG)

UN-No. (IMDG) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Packing group (IMDG) : Not applicable
Transport hazard class(es) (IMDG) : Not applicable

Air transport(IATA)

UN-No. (IATA) : Not applicable
Proper Shipping Name (IATA) : Not applicable
Packing group (IATA) : Not applicable
Transport hazard class(es) (IATA) : Not applicable

Marine pollutant : Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Pollutant category : Z

15. Regulatory information

Regulatory information with regard to this substance in your country or region should be examined by your own responsibility.

16. Other information

Data sources : NITE Chemical Risk Information Platform (NITE-CHRIP), National Institute of Technology and Evaluation.
Dictionary of Organic Compounds, The society of Synthetic Organic Chemistry, Kodansha Ltd. (1985) .
Solvents Handbook, T, Asahara el, Kodansha Scientific Ltd. (1976) .

The information contained herein is based on several references and the present state of our knowledge. However the SDS 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.The Safety Data Sheet(SDS) is prepared based on JIS Z7253.