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Safety Data Sheet

1. Chemical product and company identification

Product name : Ethyl methylcarbonate

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	:	14741
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

Physical hazards Flammable liquids Category 3

Hazard pictograms

Signal word : Warning

Hazard statements : Flammable liquid and vapor

Precautionary statements

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 only non-sparking tools.
Take action to prevent static discharges.
Wear protective gloves/protective clothing/eye protection/face protection.

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

Storage : Store in a well-ventilated place. Keep cool.

Disposal : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

3. Composition/information on ingredients

Distinction of substance or mixture : Substance

Synonyms : EMC

Chemical name	Concentration (%)	Formula	TSCA	EC-No.	CAS RN
Ethyl methylcarbonate	≥ 99.5	C4H8O3	Listed	433-480-9	623-53-0

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 : Rinse mouth with water. Give the victim one or two glasses of water or milk. Do not induce vomiting. Get medical treatment as soon as possible.

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. Remove all sources of ignition. 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. Fire is strictly prohibited. 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. Purge container with inert gas.
Material used in packaging/containers	:	Glass, fluorine resin, stainless steel. Do not use vinyl chloride resin, acrylic resin, polyethylene etc.

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 gas mask for organic solvents or airline respirator.
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	:	Aromatic
pH	:	No data available
Melting point	:	-55 ° C
Freezing point	:	No data available
Boiling point	:	102 ° C
Flash point	:	25 ° C (C.C.)
Auto-ignition temperature	:	443 ° C
Decomposition temperature	:	No data available
Flammability	:	Flammable
Vapor pressure	:	43 hPa (25℃)
Relative density	:	No data available
Density	:	1.013 g/cm^3 (20℃)
Relative gas density	:	No data available

Solubility	:	Water: 47.1 g/L (20℃)
Partition coefficient n-octanol/water (log Pow)	:	0.972
Explosive limits (vol %)	:	1.4 - 11 vol %
Viscosity, kinematic	:	0.69 mm²/s (20℃)
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>5000 mg/kg
Acute toxicity (dermal)	:	Classification not possible
Acute toxicity (inhalation)	:	No classification (gas) No classification (vapor) rat LC50>17.6 mg/L/4h Classification not possible (dust, mist)
Skin corrosion/irritation	:	Classification not possible It was repoted that in a skin irritation test (semi-occlusive, 4-hour application) using rabbits (n=6), one animal showed mild erythema at 1 hour of application and one animal showed mild erythema at 24 and 48 hours, both of which recovered after 72 hours. However, classification is not possible due to lack of data.
Serious eye damage/irritation	:	Classification not possible In an eye irritation study using rabbits (n=6), iritis was observed in one case at 1 hour after application, minor to moderate conjunctival irritation was observed in all cases, and conjunctival irritation persisted in one case until 24 hours but recovered at 48 hours. However, classification is not possible due to lack of data.
Respiratory sensitization	:	Classification not possible
Skin sensitization	:	Classification not possible There is a report that no sensitization was observed in a skin sensitization test (Maximization test: OECD TG 406) using guinea pigs, but there is no information on humans, so the product cannot be classified due to insufficient data.
Germ cell mutagenicity	:	Classification not possible In vitro, negative results were reported in a reversion mutation test using Salmonella and E. coli (OECD TG 471) and a chromosomal aberration test using rat liver S9 (OECD TG 473), but classification is not possible due to lack of data.
Carcinogenicity	:	Classification not possible
Reproductive toxicity	:	Classification not possible
STOT-single exposure	:	Classification not possible

STOT-repeated exposure	:	Classification not possible In a 28-day repeated oral administration study in rats (dose levels: 0, 15, 150, 1000 mg/kg/ days), it was reported that hypersalivation was sporadically observed in females at 1000 mg/kg doses after 5 days of administration, and clinical signs of hunched posture were observed after 14 days, and that NOAEL was ≥1000 mg/kg (males) and 1000 mg/kg (females). However there is insufficient information on toxicity for classification by other routes, and due to insufficient data, classification is not possible.
Aspiration hazard	:	Classification not possible

12. Ecological information

Ecotoxicity

Aquatic acute	:	Classification not possible Desmodesmus subspicatus EC50>62 mg/L/72h
Aquatic chronic	:	Classification not possible

Persistence and degradability

Readily biodegradable
BOD : 98%

Bioaccumulative potential

Low bioconcentration
log Pow : 0.972

Mobility in soil

High mobility
Koc : 1.58

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)	:	3272
Proper Shipping Name (IMDG)	:	ESTERS, N.O.S.
Packing group (IMDG)	:	III
Transport hazard class(es) (IMDG)	:	3

Air transport(IATA)

UN-No. (IATA)	:	3272
Proper Shipping Name (IATA)	:	Esters, n.o.s.
Packing group (IATA)	:	III

Transport hazard class(es) (IATA)	:	3
Marine pollutant	:	Not applicable
MFAG-No	:	128

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. ECHA (European Chemicals Agency).

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.