

Safety Data Sheet

1. Chemical product and company identification

Product name : Diethylene glycol dimethyl ether

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 : 10232
 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
Health hazards	Serious eye damage/eye irritation	Category 2B
	Reproductive toxicity	Category 1B

Hazard pictograms



Signal word : Danger

Hazard statements : Flammable liquid and vapor
 Causes eye irritation
 May damage fertility or the unborn child

Precautionary statements

Prevention : Do not handle until all safety precautions have been read and understood.
 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.
 Wash hands, forearms and face thoroughly after handling.
 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 .
 IF IN EYES: Rinse cautiously with water for several minutes.
 Remove contact lenses, if present and easy to do. Continue



	rinsing. IF exposed or concerned: Get medical advice/attention. If eye irritation persists: Get medical advice/attention.
Storage	: Store in a well-ventilated place. Keep cool. Store locked up.
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	: Bis(2-methoxyethyl)ether、Diglyme、Dimethyl carbitol、2-Methoxyethyl ether、DMDG

Chemical name	Concentration (%)	Formula	TSCA	EC-No.	CAS RN
Diethylene glycol dimethyl ether	> 98	C6H14O3	Listed	203-924-4	111-96-6

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 or salt water and induce vomiting. 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	: Water, dry chemical powder, carbon dioxide, dry sand, foam
Unsuitable extinguishing media	: None
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. 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
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from spillage area by stretching ropes.

Environmental precautions

Environmental precautions : Attention should be given to avoid discharge of spilled product into rivers and resulting environmental damage. When diluting spill with large amounts of water, discharge of untreated wastewater into the environment must be avoided.

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 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 the bottle tightly closed in a cool, dark place because the substance is hygroscopic.

Material used in packaging/containers : Glass, fluorine resin, stainless steel.
Do not use polyvinyl chloride resin, polystyrene.

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 : Slight ethereal

pH : No data available

Melting point : -68 ° C

Freezing point : No data available

Boiling point : 162 ° C



Flash point	: 51 ° C (C.C.)
Auto-ignition temperature	: 190 ° C
Decomposition temperature	: No data available
Flammability	: Flammable
Vapor pressure	: 0.33 kPa (20°C)
Relative density	: 1.01 (20°C)
Density	: 0.940 - 0.945 g/cm ³ (20°C)
Relative gas density	: 4.6
Solubility	: Water: Miscible. Organic solvents: Soluble in ethanol, propylene glycol, esters, etc.
Partition coefficient n-octanol/water (log Pow)	: -0.36
Explosive limits (vol %)	: 1.5 - 17.4 vol %
Viscosity, kinematic	: 1.16 mm ² /s (20°C)
Particle characteristics	: No data available

10. Stability and reactivity

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

11. Toxicological information

Acute toxicity (oral)	: No classification rat LD50=4760 mg/kg
Acute toxicity (dermal)	: Classification not possible
Acute toxicity (inhalation)	: No classification (gas) Classification not possible (vapor) No classification (dust, mist) rat LD50=24 mg/L/4h
Skin corrosion/irritation	: No classification Based on the data of mild irritation at 24 hours after application of 0.5 mL in a test using rabbits and no irritation in a test using other rabbits, the product was judged to be slightly irritating and classified as "No classification".
Serious eye damage/irritation	: Causes eye irritation Based on the data that mild irritation had been observed for 24 hours when applied 0.1 mL to rabbit eyes and no irritation was observed at the test using other rabbits, the substance was decided to have mild irritation, it was classified as category 2B.
Respiratory sensitization	: Classification not possible
Skin sensitization	: No classification Based on the results of no sensitization in the Buehler test and the Alternative footpad method using guinea pigs, it was classified as "No classification".



Germ cell mutagenicity	: No classification Negative in a chromosomal aberration test (somatic in vivo mutagenicity test) in bone-marrow cells following inhalational exposure in rats. Therefore, it was classified as "No classification".
Carcinogenicity	: Classification not possible
Reproductive toxicity	: May damage fertility or the unborn child In a combined repeated-dose toxicity and reproductive development screening study in rats by forced oral administration (OECD TG422, GLP), liver effects (lobular central hepatocyte hypertrophy, increased relative weight (females only)), low MCV (males), and increased extramedullary hematopoiesis in the spleen (females) were observed in parent animals at high doses. Effects on sexual function and fertility (prolonged sexual cycle length, prolonged gestation period, increased post-implantation embryo loss rate, decreased delivery rate, and abnormal nursing status) and developmental effects on live births (decreased birth rate, decreased 4-day survival rate, and decreased number of live births at 4 days after birth) were observed at high doses. In addition, developmental toxicity studies by inhalation and oral route showed distinct fetal toxicity (increased absorption and fetal mortality) and increased incidence of malformations at doses that had no maternal toxicity or only suppressed weight gain. Therefore, it was classified as category 1B.
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 Daphnia magna EC50=943 mg/L/48h
Aquatic chronic	: No classification Daphnia magna NOEC=320 mg/L/21-day

Persistence and degradability

Not readily biodegradable
BOD : 0%

Bioaccumulative potential

Low bioconcentration
BCF : 3

Mobility in soil

High mobility
Koc : 15

Hazardous to the ozone layer

Ozone : No classification

13. Disposal considerations

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



Contaminated container and packaging : with the disposal.
: 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) : 3271
Proper Shipping Name (IMDG) : ETHERS, N. O. S.
Packing group (IMDG) : III
Transport hazard class(es) : 3

(IMDG)

Air transport(IATA)

UN-No. (IATA) : 3271
Proper Shipping Name (IATA) : Ethers, n. o. s.
Packing group (IATA) : III
Transport hazard class(es) : 3

(IATA)

Marine pollutant : Not applicable

MFAG-No : 127

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.
Handbook of 17625 Chemical Products, The Chemical Daily Co. (2025) .

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.

