

SAFETY DATA SHEET

SDS: A5501-0000_E001

Date Prepared: 2017/05/23

Date Revised: 2023/01/10

Product Name: **DI METHYL GLYCOL (DMG)****1. Identification of the substance/mixture and of the company/undertaking**

Product name: DI METHYL GLYCOL (DMG)
 Identification of the supplier: Nippon Nyukazai Co., Ltd.
 Address: No.4-1.Nihonbashi Kobuna-cho, Chuo-ku, Tokyo 103-0024, Japan
 Charge section: Business Operation Department
 (TEL:+81-3-5651-5640,FAX:+81-3-5651-5646)
 Emergency telephone number: Business Operation Department
 (TEL:+81-3-5651-5640,FAX:+81-3-5651-5646)
 Recommend use: diluent , reaction solvent
 Restrictions on use: Seek expert judgment when using for purposes other than those recommended.
 Recommend use / Restrictions on use : Reaction solvent etc

2. Hazards identification

Hazard category

Flammable liquids	Category 2
Toxic to reproduction	Category 1B
Specific target organ systemic toxicity following single exposure	Category 3

Label elements

Hazard pictograms:



Signal word: Danger

Hazard statements: H225 Highly flammable liquid and vapour.
 H360 May damage fertility or the unborn child.
 H335+H336 May cause respiratory irritation, or May cause drowsiness or dizziness.

Precautionary statements:

Prevention P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P233 Keep container tightly closed.
 P240 Ground and bond container and receiving equipment.
 P241 Use explosion-proof electrical/ventilating/lighting equipment.
 P242 Use non-sparking tools.
 P243 Take action to prevent static discharges.

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P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P271 Use only outdoors or in a well-ventilated area.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response P312 Call a POISON CENTRE/doctor/healthcare professionals under the supervision of a doctor if you feel unwell.
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P370+P378 In case of fire : Use appropriate extinguishing media for extinction.

Storage P405 Store locked up.
 P403+P233 Store in a well ventilated place. Keep container tightly closed.
 P403+P235 Store in a well ventilated place. Keep cool.

Disposal P501 Dispose of contents/container in accordance with local/regional/national/international regulation.

3. Composition/information on ingredients

3.1. Substances

Ingredients and Concentration

Ingredient Name	Concentration wt. %	CAS RN®	Existing and New Chemical Substances (JAPAN)	Industrial Safety and Health Law Substances (JAPAN)	Industrial Safety and Health Law (JAPAN)	Pollutant Release Transfer Register Law (JAPAN)	Poisonous and Deleterious Substances Control Act (JAPAN)
			Gazette notice reference number	Gazette notice reference number	Notifiable Substances	Specified Substances	Poisonous and Deleterious Substances
Ethyleneglycol Dimethyl Ether	99-100	110-71-4	2-421, 7-1321	Public	Not applicable	Not applicable	Not applicable

3.2. Mixtures

Not Applicable

4. First aid measures

Inhalation:

Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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Skin contact:	<p>If breathing is stopped, lie on your back and perform cardiopulmonary respiration. Get medical advice/attention. Take off contaminated clothing and wash before reuse. Wash with plenty of soap and water.</p>
Eye contact:	<p>If skin irritation or a rash occurs: Get medical advice/attention. Immediately flush eye with plenty of clean water for at least 15 minutes. (If easy to do, remove contact lenses, if worn.) Get medical attention immediately.</p>
Ingestion:	<p>After having swallowed it, Drink a large quantity of water when consciousness becomes clear and receive treatment for the doctor immediately. A mouth must not give a person without the consciousness a thing.</p>
Protection for first aid person:	<p>The rescuer wears a tool for appropriate protection depending on the situation.</p>

5. Firefighting measures

Suitable extinguishing media:	Use water spray(fog), foam, dry chemical or CO ₂ .
Extinguishing media to avoid:	Straight stream water.
Specific hazards arising from the chemical:	At the time of fire, hazardous gases (carbon monoxide and others) can be generated.
Fire fighting:	<p>Keep upwind of fire. Eliminate all ignition sources if safe to do so. In case of fire in the surroundings, move the content/container to the safety place. If it is not possible to move, cool the content/container with water spray.</p>
Special protective equipment and precautions for fire fighters:	Gloves, protection glasses, wear fire, flame resistant, retardant clothing, air respiratory organs wear a tool for appropriate protection.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	<p>Promptly remove possible ignition sources from the vicinity. Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.</p>
Environmental precautions:	To environment (area of the sea, the soil) must not release it.
Methods and materials for containment and cleaning up:	<p>Absorb this product with inactive materials (example: dry sand, earth) and recover it into a waste material container. In the case of large amount, stop leakage with earth/sand to begin with, and, then, recover it.</p>

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In the case of a small quantity, I adsorb it in the earth and sand, a waste and collect it in empty container which I can seal up after having removed it.

7. Handling and storage

Handling

Technical measures: During handling, be sure to wear proper protective equipment (refer to the section 8).
This product can be charged with static electricity. Take countermeasures for static electricity removal (grounding, others).
Wear antistatic clothes and antistatic shoes to prevent human body electrification.
Use explosion-proof electrical/ventilating/lighting equipment.

Ventilation requirements: Use the ventilation equipment described in Section 8.

Precautions for safe handling: Concentration promotes the formation of peroxide. Do not evaporate to dryness.

Storage

Storage conditions: Store the containers avoiding direct sunlight. Store in less than 40°C in a well-ventilated room.

Safety adequate container materials: Use the container specified by the Fire Service ACT and the United Nations Transport Regulations.

8. Exposure controls/personal protection

Appropriate engineering controls: Use local ventilation equipment.
Install eye and body washing facilities near the handling place.
Display the position of equipment clearly.

Control parameters

Ingredient Name	Industrial Safety and Health Law (JAPAN)	Japan Society for Occupational Health	ACGIH-TLV	
	Administrative Control Levels	Occupational Exposure Limits	TWA	STEL
Ethyleneglycol Dimethyl Ether	Not established	Not established	Not established	Not established

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Personal protective equipment

Respiratory protection:	Use a gas mask for organic gases, air-supplied respirator, self-contained compressed air breathing apparatus on the situation.
Hand protection:	Organic solvent impermeable protective gloves (Antistatic ones are desirable.)
Eye/face protection:	Protective glasses, goggle, protective face shield.
Skin/body protection:	Wear long-sleeved working clothes and protective shoes.(Antistatic ones are desirable.)
	Use an oiliness apron-resistant, boots depending on the situation.
Hygiene measures:	Wash with soap and water after handling.

9. Physical and chemical properties

Product

Form:	Liquid (20°C)
Color:	Colorless transparent
Odor:	Slight ether odor
Melting point/freezing point:	Freezing point-69(°C)
Initial boiling point and boiling range:	85.2(°C)
Flammability (solid, gas):	No data
Upper/lower flammability or explosive limits:	No data
Flash point:	-1.5(°C)
Auto-ignition temperature:	440(°C)
Decomposition temperature:	No data
pH:	No data
Kinematic viscosity:	No data
Solubility:	water : Soluble.
Partition coefficient: n-octanol/water:	No data
Vapour pressure:	6.4(k Pa)(20°C)
Specific Gravity:	0.868(20°C)
Vapour density:	No data
Evaporation rate:	4.99
Particle characteristics:	No data

10. Stability and reactivity

Chemical stability: Stable under normal temperatures and pressures.

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Possibility of hazardous reactions:	It may react with the oxidizing agent and generate heat.
Conditions to avoid:	Avoid heat, flames, sparks and ignition sources.
Incompatible materials:	Acid, Oxidizing agents.
Hazardous decomposition products:	No data available

11. Toxicological information

Product

Acute toxicity (oral):	No Classification
Acute toxicity (dermal):	Classification not possible
Acute toxicity (inhalation):	Exempt classification (Gas) Classification not possible (Vapour) Classification not possible (Dust/Mist)
Skin corrosion/irritation:	Classification not possible
Serious eye damage/irritation:	Classification not possible
Respiratory sensitization:	Classification not possible
Skin sensitization:	Classification not possible
Mutagenicity:	Classification not possible
Carcinogenicity:	Classification not possible
Reproductive toxicity:	Category 1B
Target organ effect/Single exposure:	Category 3(anesthetic action)
Target organ effect/Multi exposure:	Classification not possible
Respiratory toxic:	Classification not possible

Ingredient

Ethyleneglycol Dimethyl Ether

Acute toxicity (oral):	No Classification LD50: 2525 mg/kg[mouse]
Acute toxicity (dermal):	Classification not possible Effect on animals : No data
Acute toxicity (inhalation):	Exempt classification (Gas) Classification not possible (Vapour) Classification not possible (Dust/Mist) Effect on animals : No data
Skin corrosion/irritation:	Classification not possible Effect on animals : No data
Serious eye damage/irritation:	Classification not possible Effect on animals : No data
Respiratory sensitization:	Classification not possible Effect on person : No data
Skin sensitization:	Classification not possible Effect on person : No data

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Mutagenicity:	Classification not possible Because it lacks in vivo test data and in vitro mutagenicity test results with multiple indexes, classification is not possible.
Carcinogenicity:	Classification not possible No data
Reproductive toxicity:	Category 1B In oral administration tests to mice during the organogenetic period, doses that were not toxic to maternal animals caused such signs as limb deformities and exencephaly in offspring (ECETOC TR.17 (1985), TR.64 (1995), TR.95 vol. 2 (2005), PATTY (5th, 2001)). In addition, it is rated R60 and R61 in EU classification and classified into Reproductive toxicity category 2 (equivalent to GHS Category 1B). Thus, the substance was classified into Category 1B.
Target organ effect/Single exposure:	Category 3(anesthetic action) Since the doses being over the upper limit of the guidance value for Category 2 caused significant reduction in avoidance response, not in escape response (PATTY (5th, 2001)), the substance was classified into Category 3 (narcotic effects).
Target organ effect/Multi exposure:	Classification not possible In a 2-week inhalation exposure test using rats, doses of 3.75 mg/L and 7.5 mg/L (4 hours/day, 5 days/week), which keep animals alive and are within guidance values for Category 2, caused a reversible significant decrease in the avoidance response (PATTY (5th, 2001)). Since half of the animals died at the dose of 30 mg/L (4 hours/day, 5 days/week) (equivalent to Not classified), the substance is suspected to affect the central nervous system. However, the substance was classified into "Classification not possible" due to a lack of data. Because its saturated vapour pressure concentration (20degC) is 63200 ppmV (237 mg/L), its physicochemical state was considered to be vaporous.
Respiratory toxic:	Classification not possible Effect on person : No data

12. Ecological information

Product

Ecotoxicity	
Acute toxicity:	Classification not possible
Chronic toxicity:	Classification not possible
Persistence and degradability :	No information.

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Bioaccumulative potential :	No information.
Mobility in soil:	No information.
Hazardous to the ozone layer:	Classification not possible
Other impact :	No information.

Ingredient

Ethyleneglycol Dimethyl Ether

Ecotoxicity

Acute toxicity:	Classification not possible
Fish:	No data
Daphnia:	No data
Algae:	No data
Chronic toxicity:	Classification not possible
Fish:	No data
Daphnia:	No data
Algae:	No data
Persistence and degradability :	Not biodegradable
Bioaccumulative potential :	No data
Hazardous to the ozone layer:	Classification not possible

13. Disposal considerations

Disposal methods: When waste materials and waste water are to be treated, collect them into specified containers and entrust the disposal to a disposal contractor having an industrial waste disposal contractor permit.

Do not use the used containers for other purposes like filling other substances. Be sure to dispose of them after treating the content according to the above description. In case of recycling the container, return the container as it is after fitting a stopper without filling anything into it.

14. Transport information

International regulations	UN classification :	3	
	UN number :	2252	
	Proper shipping name :	1,2-DIMETHOXYETHANE	
	Packing	II	
Domestic restriction:	Transport the material in accordance with the regulations in your country or region.		
Specific security precaution and condition of transportation:	Load the containers in such a way as not to wet with water, fall down, tumble, or being damaged. Cover the loaded cargo to prevent direct sunlight.		

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Emergency Response Guide 127
(ERG) Numbers:

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

Reference	Information obtained in NITE (National Institute of Technology and Evaluation) and other literature surveys.
Disclaimer	<p>About the description: This SDS was created in accordance with JIS Z 7253 based on the materials and data available at the time of creation.</p> <p>Detailed information such as composition and ingredients corresponding to overseas legal regulation registration confirmation etc. may not be described, so please contact our sales staff separately if necessary.</p> <p>Precautions are for normal handling. In case of special handling, it is the responsibility of the user to take safety measures suitable for the intended use and usage.</p> <p>We have paid close attention to the contents, but we do not guarantee the contents.</p> <p>This product can only be used for industrial purposes. If you want to use it for other purposes, please contact us in advance.</p>