

SAFETY DATA SHEET

SDS: A5103-0000_E001

Date Prepared: 2018/03/02

Date Revised: 2023/01/10

Product Name: **METHYL TRI GLYCOL**

1. Identification of the substance/mixture and of the company/undertaking

Product name: METHYL TRI GLYCOL
 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: brake fluid
 Restrictions on use: Seek expert judgment when using for purposes other than those recommended.

2. Hazards identification

Hazard category Not applicable

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
Triethylene glycol monomethyl ether	98-100	112-35-6	2-442, 2-2979, 7-97	Public	Not applicable	Not applicable	Not applicable

3.2. Mixtures

Not Applicable

SAFETY DATA SHEET

SDS: A5103-0000_E001

Date Prepared: 2018/03/02

Date Revised: 2023/01/10

Product Name: **METHYL TRI GLYCOL**

4. First aid measures

Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is stopped, lie on your back and perform cardiopulmonary respiration. Get medical advice/attention.
Skin contact:	Take off contaminated clothing and wash before reuse. Wash with plenty of soap and water. If skin irritation or a rash occurs: Get medical advice/attention.
Eye contact:	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.
Ingestion:	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.
Protection for first aid person:	The rescuer wears a tool for appropriate protection depending on the situation.

5. Firefighting measures

Suitable extinguishing media:	Use water spray(fog), foam, dry chemical or CO2.
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:	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.
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:	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.
Environmental precautions:	To environment (area of the sea, the soil) must not release it.

SAFETY DATA SHEET

SDS: A5103-0000_E001

Date Prepared: 2018/03/02

Date Revised: 2023/01/10

Product Name: **METHYL TRI GLYCOL**

Methods and materials for
containment and cleaning up:

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.

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: Not especially.

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.

SAFETY DATA SHEET

SDS: A5103-0000_E001

Date Prepared: 2018/03/02

Date Revised: 2023/01/10

Product Name: **METHYL TRI GLYCOL**

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
Triethylene glycol monomethyl ether	Not established	Not established	Not established	Not established

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: Faint Odor
- Melting point/freezing point: < -44(°C)
- Initial boiling point and boiling range: 249(°C)
- Flammability (solid, gas): No data
- Upper/lower flammability or explosive limits: No data
- Flash point: 139(°C)
- Auto-ignition temperature: 222(°C)
- Decomposition temperature: No data
- pH: No data
- Kinematic viscosity: No data
- Solubility: water : Soluble.

SAFETY DATA SHEET

SDS: A5103-0000_E001

Date Prepared: 2018/03/02

Date Revised: 2023/01/10

Product Name: **METHYL TRI GLYCOL**

Partition coefficient: n-octanol/water:	No data
Vapour pressure:	1.333(Pa)(20°C)
Specific Gravity:	1.049(20°C)
Vapour density:	No data
Particle characteristics:	No data

10. Stability and reactivity

Chemical stability:	Stable under normal temperatures and pressures.
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):	No Classification
Acute toxicity (inhalation):	Exempt classification (Gas) Classification not possible (Vapour) No Classification (Dust/Mist)
Skin corrosion/irritation:	No Classification
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:	Classification not possible
Target organ effect/Single exposure:	No Classification
Target organ effect/Multi exposure:	Classification not possible
Respiratory toxic:	Classification not possible

Ingredient

Triethylene glycol monomethyl ether

Acute toxicity (oral):	No Classification LD50: 11300-12600 mg/kg[rat]
Acute toxicity (dermal):	No Classification LD50: 7400 mg/kg[rabbit]

SAFETY DATA SHEET

SDS: A5103-0000_E001

Date Prepared: 2018/03/02

Date Revised: 2023/01/10

Product Name: **METHYL TRI GLYCOL**

Acute toxicity (inhalation):	<p>Exempt classification (Gas) Classification not possible (Vapour) No Classification (Dust/Mist) Effect on animals : (Vapour) Cannot be classified due to lack of data. (Dust/Mist) Based on the report (SIDS (2005)) that there were no deaths in the 200 mg / L (1 hour) inhalation test (4-hour conversion value: 50 mg / L) of rats, it was "No Classification". Since the test concentration is higher than the saturated vapor pressure concentration (0.08 mg / L), the standard value in mg / L as the mist was applied.</p>
Skin corrosion/irritation:	<p>No Classification Mild [rabbit] Effect on person : "Mild irritation" when applied to 20 men and women for 72 hours(SIDS (2005)) . Effect on animals : The results of a 24-hour skin irritation test using rabbits describe "mild irritation" (SIDS (2005)). Based on the above, it was "No Classification"(Category 3 of the United Nations classification standard).</p>
Serious eye damage/irritation:	<p>Classification not possible Effect on animals : Cannot be classified due to lack of data.</p>
Respiratory sensitization:	<p>Classification not possible Effect on person : Cannot be classified due to lack of data.</p>
Skin sensitization:	<p>Classification not possible Effect on person : Cannot be classified due to lack of data.</p>
Mutagenicity:	<p>Classification not possible Due to the revision of the classification guidance, "No Classification" can no longer be selected, so "Classification not possible". In vivo, the micronucleus test of mouse bone marrow cells was negative (SIDS (2005), ECETOC TR64 (1995), ECETOC TR95 (2005)). In vitro, the reverse mutation test of bacteria and the gene mutation test of cultured mammalian cells are negative (SIDS (2005), ECETOC TR64 (1995), ECETOC TR95 (2005), IUCLID (2000)).</p>
Carcinogenicity:	<p>Classification not possible Cannot be classified due to lack of data.</p>
Reproductive toxicity:	<p>Classification not possible Cannot be classified due to lack of data.</p>

SAFETY DATA SHEET

SDS: A5103-0000_E001

Date Prepared: 2018/03/02

Date Revised: 2023/01/10

Product Name: **METHYL TRI GLYCOL**

Target organ effect/Single exposure:	<p>No Classification</p> <p>The highest dose (16 mL / kg) of death was observed by oral administration of the drug, but the concentration outside the range of other guidance (4-8 mL / kg) did not clearly describe the symptoms (4-8 mL / kg). SIDS (2005)).</p> <p>In addition, it has been reported that no death or toxic symptoms were observed in inhaled exposure (mist) of rats at concentrations outside the guidance range (4 hour equivalent: 50 mg / L) (SIDS (2005)). It is stated that there was no toxic effect on exposure to saturated vapor concentrations (ECETOC TR95 (2005), PATTY (6th, 2012)). In a transdermal administration study in rabbits, death was observed at the highest dose (10 g / kg), but no toxic effects were observed at concentrations outside the range of other guidance (2.5-5 g / kg) (SIDS(2005)).</p> <p>From the above results, it was judged to be "No Classification".</p>
Target organ effect/Multi exposure:	<p>Classification not possible</p> <p>In a study in which rats were orally (drinking) for 13 weeks (high dose (400 mg / kg / day or more) exceeding the guidance value range of Category 2), effects on the liver and testis were observed. In addition, no effect (rabbit) or testis effect (rat) in studies with percutaneous exposure to rats for 13 weeks and rabbits for 21 days (high doses above the guidance value range of Category 2 (400 mg / kg / day or higher)) (SIDS (2005), ECETOC TR95 (2005), HSDB (Access on October 2013)).</p> <p>Based on the above, it is considered that oral and transdermal are equivalent to "No Classification", but it was not possible to classify because the toxic effect on the inhalation route is unknown.</p>
Respiratory toxic:	<p>Classification not possible</p> <p>Effect on person : Cannot be classified due to lack of data.</p>

12. Ecological information

Product

Ecotoxicity	
Acute toxicity:	No Classification
Chronic toxicity:	No Classification
Persistence and degradability :	No information.
Bioaccumulative potential :	No information.
Mobility in soil:	No information.

SAFETY DATA SHEET

SDS: A5103-0000_E001

Date Prepared: 2018/03/02

Date Revised: 2023/01/10

Product Name: **METHYL TRI GLYCOL**

Hazardous to the ozone layer: Classification not possible

Other impact : No information.

Ingredient

Triethylene glycol monomethyl ether

Ecotoxicity

Acute toxicity:

No Classification

Fish:

72hrLC50:> 10000 mg/L[Pimephales promelas]

Daphnia:

48hrEC50:> 10000 mg/L[Daphnia magna]

Algae:

72hrEC50:> 500 mg/L[Scenedesmus]

Chronic toxicity:

No Classification

Fish:

No data

Daphnia:

No data

Algae:

No data

Persistence and degradability :

Readily 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 UN classification : Not applicable

regulations UN number : Not applicable

Proper shipping name : Not applicable

Packing group : Not applicable

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.

Emergency Response Guide (ERG) Numbers: 171

SAFETY DATA SHEET

SDS: A5103-0000_E001

Date Prepared: 2018/03/02

Date Revised: 2023/01/10

Product Name: **METHYL TRI GLYCOL**

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>