

# Safety Data Sheet



## 1. Identification of the Substance/Mixture and the Supplier

Supplier : The National Institute of Advanced Industrial Science and Technology  
 Address : 1-3-1 Kasumigaseki, Chiyoda, Tokyo, Japan  
 Department : Reference Material Office, Center for Quality Management of Metrology, The National Metrology Institute of Japan  
 Person in Charge : Certified Reference Material Staff  
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 Emergency Contact : Same as above

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ID Number : 5005001

Identity of Substance/Mixture : Certified Reference Material NMIJ CRM 5005-a  
 Substance/Mixture : Poly(ethylene glycol) 400  
 Recommended Use of the Chemical and Restriction on Use : It is intended for use in the calibration of instruments, validation of measurements, and evaluation of analytical performance used to determine the average molecular mass and molecular mass distribution of polymers.  
 Do not use this reference material for other purposes than testing/research.

## 2. Hazards Identification

GHS Classification : Skin corrosivity/irritant : Class 3  
 Severe damage to eyes/eye irritant : Class 2B

GHS Label Element: -

Signal word : Warning

Hazard and toxicity : Eye irritant  
 Mild skin irritant

Other hazard and toxicity : Have little effect when handling under normal condition  
 Large amount intake harmful  
 Combustible

Precautionary statement : [Preventive measures]  
 Being combustible, avoid open flame or fire sources.  
 Avoid contact with oxidizers  
 [Response]

If swallowed : Drink a large amount of water and induce vomiting.  
 Get medical assistance

If in eyes : Rinse carefully with water for few minutes, then, if contact lenses are inserted, remove them if possible, and continue rinsing.

Wash hands after the handling

If eye irritation persists or skin irritation occurs, get medical assistance/treatment

[Storage]

This CRM should be stored at a temperature of 25 °C or below in a clean place and shielded from light. However, in case of long-term storage of 1 month and more, the CRM should be stored in a clean place at a temperature of 5 °C or below.

[Disposal]

Dispose of this reference material in accordance with applicable legislation and local government ordinance.

Entrust disposal of this reference material to a professional waste disposal company licensed by prefectural governor.

The other hazards than the above do not result in classification or are not classifiable.

### 3. Composition/Information on Ingredients

Single or compound product	: Single product
Chemical name	: Polyethylene glycol
Synonym	: Polyoxyethylene
Content	: Over 99.9 %
Chemical or structural formula	: $O(-CH_2CH_2O-)_iH$ (i is polymerization degree)
Molecular weight	: Weight average molecular weight (Mw) : 431.2 Number average molecular weight (Mn) : 409.9
Reference Number in Gazetted List in Japan	: Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. : (7)-129 Industrial Safety and Health Act : Published
CAS No.	: 25322-68-3

### 4. First-aid Measures

If in eyes	: Rinse with plenty of clean water. Get medical assistance.
If on skin	: Rinse with plenty of clean water. Take off the contaminated clothes and shoes, etc. Get medical assistance.
If inhaled	: Move to get some fresh air, rest, keep warm. Get medical assistance.
If swallowed	: Drink water or saline solution to induce vomiting. If unconscious, do not give anything. Contact medical doctor.
Anticipated acute and delayed symptoms	: -
Most important characteristics and	: -

symptoms

Measures to be taken to protect the person involving in first aid : Rescuer should use protective equipment such as rubber gloves, side shielded safety goggles, etc.

## 5. Fire-fighting Measures

Extinguishing media : Powder, alcohol-resistant foam, carbon-dioxide, sand, water spray

Specific hazards at the time of fire : Neither flammable nor ignitable under general condition. When possible, extinguishing activity should be on the windward side to avoid inhaling carbon monoxide, NO<sub>x</sub>, CN, etc. contained in flaming gas.

Specific extinguishing measures : Remove fire sources and extinguish using appropriate agent compatible with the substance. Movable container should be transferred to a safe place promptly. If impossible to transfer, use water spray to cool the periphery. Extinguishing activity on windward side to avoid inhaling toxic gases.

Protecting fire-fighting personnel : Protective clothes, air breathing apparatus, self-contained compressed oxygen breathing apparatus, rubber boots

## 6. Accidental Release Measures

Personal precautions : Promptly remove fire sources from around the substance. Ready for a fire by keeping an appropriate extinguisher at hand.

Protective equipment and emergency procedure : If released indoor, ventilate well until the treatment is completed. Use appropriate protective equipment to protect the skin from the airborne droplets, etc., avoid inhaling dust and gas

Environmental precaution : To prevent causing environmental impact, the spilled material should not be released into rivers, etc. directly. The contaminated waste water should be treated appropriately before discharged to the environment.

Recovery, neutralization : The spilled liquid should be adsorbed to waste cloth or to sand and soil and wiped off completely. Everything used to clean up the spillage should be collected in an airtight container; then wash away with a large amount of water.

Measures to prevent secondary accident : -

## 7. Handling and Storage

Handling

Technological counter measures : Fire sources prohibited  
Avoid contact with high temperature matter, sparks, strong oxidizers

Local ventilation/ : Use local exhaust ventilation system when handling indoor.

- general ventilation
- Precautions for safe handling : The container should not be handled roughly, no dropping, knocking down or dragging.  
Prevent leakage, spillage or overflow that causes fume to form.  
Seal the container after the use.  
Wash hands and face, etc. well and gargle after the handling  
Before entering resting area, take off the contaminated protective equipment used while handling.  
Entering the handling area only by the authorized persons.  
Use appropriate protective equipment to prevent inhaling, coming in contact with eyes, skin and the clothing
- Storage
- Appropriate condition : This CRM should be stored at a temperature of 25 °C or below in a clean place and shielded from light. However, in case of long-term storage of 1 month and more, the CRM should be stored in a clean place at a temperature of 5 °C or below.
- Material for safe packing : Glass, polyethylene, polypropylene

## 8. Exposure Controls/Personal Protection

Consideration for the safety management

Not established

Occupational exposure limit

Not established

Facility engineering

◇Storage precaution

- Protect from light, in a sealed container, in a clean place at a temperature of 25 °C or below. However, in case of long-term storage of 1 month and more, the CRM should be stored at a temperature of 5 °C or below.
- If discharging dust, seal the source and install local ventilation system.

Protective equipment

- Protective mask, protective gloves, protective eyeglasses, protective eyeglasses with side shields (goggles, if necessary), protective clothing.

## 9. Physical and Chemical Properties

- Appearance, etc. : Liquid (5 °C)
- Color : Colorless
- Odor : No data
- pH : No data
- Melting point : No data
- Boiling point : No data
- Flashing point : No data
- Explosive range : No data
- Vapor pressure : No data
- Relative vapor : No data

density(Air=1)

- Specific gravity or bulk specific gravity : No data
- Solubility : No data
- *n*-Octanol/water partition coefficient (Log Po/w) : No data
- Auto-ignition temperature : No data

## 10. Stability and Reactivity

◇Stability

- No data available

◇Reactivity

- No data available

◇Conditions to avoid

- Sunlight, heat, open flame, high temperature, spark, static electricity, other fire sources

◇Hazardous decomposition products

- Carbon Monoxide

## 11. Toxicological Information

Acute toxicity	Intravenous	cat	TDL <sub>0</sub> : 1000 mg/kg (RTECS)
Skin corrosivity/irritant	Skin irritation	rabbit	500 mg/24H mild (RTECS)
Severe damage to eyes/ eye irritant	Eye irritation	rabbit	500 mg/24H mild (RTECS)

## 12. Ecological Information

Degradability, concentration

Degree of degradation : 56 % by BOD(n= 4)(METI: Safety Examination of Existing Chemicals and Safety Programmes in Japan)

Degree of degradation : 53 % by BOD(n=10) (METI: Safety Examination of Existing Chemicals and Safety Programmes in Japan)

Bioaccumulation : No data available

Ecotoxicity : No data available

## 13. Disposal Considerations

Incineration method : Dissolve the material in flammable solvent and spray it into the incineration chamber equipped with scrubber. Before draining the waste water, treat with activated sludge method.

## 14. Transport Information

UN Number : Not applicable

UN : Not applicable

Classification

Material name : -

Precaution : Transfer with caution by avoiding direct sunlight and fire source at the temperature below 25 °C. Protect from leakage or spill due to fall or drop.

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## 15. Regulatory Information

◇Fire Service Act

- Hazardous material Category 4, No. 4 Petroleum, Hazard class III
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## 16. Other Information

Other

The information in this document is not intended to be exhaustive and is based on currently available information and data. The measures given in this document are applicable only to normal handling conditions. When handling this reference material under special conditions etc., it is recommended to take safety measures appropriate to each specific application and context of use. This document is intended to provide information and not intended to guarantee anything in handling this reference material.

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