

SAFETY DATA SHEET

According to JIS Z 7253:2019
Issue Date 19-Mar-2025
Revision Number 2.04

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	2-[2-(2-Butoxyethoxy)ethoxy]ethanol
Product Code	021-08452,025-08455

Supplier FUJIFILM Wako Pure Chemical Corporation
1-2 Doshomachi 3-Chome, Chuo-ku, Osaka 540-8605, Japan
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Recommended uses For research use only

Restrictions on use Seek expert judgment when using for purposes other than those recommended.

Section 2: HAZARDS IDENTIFICATION

GHS classification

Classification of the substance or mixture

Serious eye damage/eye irritation

Category 1

Pictograms



Signal word

Danger

Hazard statements

H318 - Causes serious eye damage

Precautionary statements-(Prevention)

- Wear protective gloves/protective clothing/eye protection/face protection

Precautionary statements-(Response)

- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- Immediately call a POISON CENTER or doctor/physician

Precautionary statements-(Storage)

- Not applicable

Precautionary statements-(Disposal)

- Not applicable

Others

Other hazards

Not available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Single Substance or Mixture Substance

Formula $\text{CH}_3(\text{CH}_2)_3(\text{OCH}_2\text{CH}_2)_3\text{OH}$

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS RN
Triethylene glycol monobutyl ether	97.0	206.28	(7)-97,(2)-436	*	143-22-6

Note on ISHL No.: * in the table means announced chemical substances.

Section 4: FIRST AID MEASURES

Inhalation

Remove to fresh air. If symptoms persist, call a physician.

Skin contact

Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.

Eye contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediate medical attention is required.

Ingestion

Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Do not induce vomiting without medical advice.

Protection of first-aiders

Use personal protective equipment as required.

Section 5: FIRE FIGHTING MEASURES

Suitable extinguishing media

Carbon dioxide (CO₂), Foam, Extinguishing powder, Sand

Unsuitable extinguishing media

No information available

Specific hazards arising from the chemical product

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Special extinguishing method

No information available

Special protective actions for fire-fighters

Use personal protective equipment as required. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For indoor, provide adequate ventilation process until the end of working. Deny unnecessary entry other than the people involved by, for example, using a rope. While working, wear appropriate protective equipments to avoid adhering it on skin, or inhaling the gas. Work from windward, and retract the people downwind.

Environmental precautions

To be careful not discharged to the environment without being properly handled waste water contaminated.

Methods and materials for contaminant and methods and materials for cleaning up

Absorb dry sand, earth, sawdust and the waste. Collect empty container that can be sealed.

Recovery, neutralization

No information available

Secondary disaster prevention measures

Clean contaminated objects and areas thoroughly observing environmental regulations.

Section 7: HANDLING AND STORAGE

Handling

Technical measures

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use with local exhaust ventilation. Use with local exhaust ventilation.

Precautions

Do not rough handling containers, such as upsetting, falling, giving a shock, and dragging. Prevent leakage, overflow, and scattering. Not to generate steam and dust in vain. Seal the container after use. After handling, wash hands and face, and then gargle. In places other than those specified, should not be smoking or eating and drinking. Should not be brought contaminated protective equipment and gloves to rest stops. Deny unnecessary entry of non-emergency personnel to the handling area.

Safety handling precautions

Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

Storage**Safe storage conditions****Storage conditions**

Keep container protect from light, store in well-ventilated place at room temperature (preferably cool). Keep container tightly closed.

Safe packaging material

Glass

Incompatible substances

Strong oxidizing agents

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls

In case of indoor workplace, seal the source or use a local exhaust system. Provide the safety shower facility, and hand- and eye-wash facility. And display their position clearly.

Exposure limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Personal protective equipment**Respiratory protection**

Protective mask

Hand protection

chemical protective gloves (JIS T 8116)

Eye protection

protective eyeglasses or chemical safety goggles (JIS T 8147)

Skin and body protection

Long-sleeved work clothes

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

If this product is classified as "Chemical Substances Hazardous to Skin, etc.", use appropriate protective equipment to them.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Form**Color**

Colorless - slightly yellow

Turbidity

clear

Appearance

liquid

Odor

no data available

Melting point/freezing point

-35 °C

Boiling point, initial boiling point and boiling range

280 °C

Flammability

no data available

Evaporation rate:

no data available

Flammability (solid, gas):

no data available

Upper/lower flammability or explosive limits**Upper:**

no data available

Lower:

no data available

Flash point

156 °C

Auto-ignition temperature:

no data available

Decomposition temperature:

no data available

pH

no data available

Viscosity (coefficient of viscosity)

no data available

Dynamic viscosity	no data available
Solubilities	water : , Very soluble . Ethanol , acetone : freely soluble .
n-Octanol/water partition coefficient:(log Pow)	no data available
Vapour pressure	no data available
Specific Gravity / Relative density	0.983 –0.990 g/m L (20℃)
Vapour density	no data available
Particle characteristics	no data available

Section 10: STABILITY AND REACTIVITY

Stability

Reactivity	no data available
Chemical stability	May be altered by light.
Hazardous reactions	None under normal processing
Conditions to avoid	Extremes of temperature and direct sunlight, Heat, flames and sparks, static electricity, spark
Incompatible materials	Strong oxidizing agents
Hazardous decomposition products	Carbon monoxide (CO), Carbon dioxide (CO ₂)

Section 11: TOXICOLOGICAL INFORMATION

*NITE: National Institute of Technology and Evaluation (JAPAN)
https://www.chem-info.nite.go.jp/en/chem/chrip/chrip_search/srhInput

Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Triethylene glycol monobutyl ether	5170 mg/kg (rat)	3540 mg/kg (rabbit)	N/A

Chemical Name	Acute toxicity -oral- source information	Acute toxicity -dermal- source information	Acute toxicity -inhalation gas- source information
Triethylene glycol monobutyl ether	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Chemical Name	Acute toxicity -inhalation vapor- source information	Acute toxicity -inhalation dust- source information	Acute toxicity -inhalation mist- source information
Triethylene glycol monobutyl ether	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Skin irritation/corrosion

Chemical Name	Skin corrosion/irritation source information
Triethylene glycol monobutyl ether	Based on the NITE GHS classification results.

Serious eye damage/ irritation

Chemical Name	Serious eye damage/irritation source information
Triethylene glycol monobutyl ether	Based on the NITE GHS classification results.

Respiratory or skin sensitization

Chemical Name	Respiratory or Skin sensitization source information
Triethylene glycol monobutyl ether	Based on the NITE GHS classification results.

Reproductive cell mutagenicity

Chemical Name	germ cell mutagenicity source information
Triethylene glycol monobutyl ether	Based on the NITE GHS classification results.

Carcinogenicity

Chemical Name	Carcinogenicity source information
Triethylene glycol monobutyl ether	Based on the NITE GHS classification results.

Reproductive toxicity

Chemical Name	Reproductive toxicity source information
Triethylene glycol monobutyl ether	Based on the NITE GHS classification results.

STOT-single exposure

Chemical Name	STOT -single exposure- source information
Triethylene glycol monobutyl ether	Based on the NITE GHS classification results.

STOT-repeated exposure

Chemical Name	STOT -repeated exposure- source information
Triethylene glycol monobutyl ether	Based on the NITE GHS classification results.

Aspiration hazard

Chemical Name	Aspiration Hazard source information
Triethylene glycol monobutyl ether	Based on the NITE GHS classification results.

Section 12: ECOLOGICAL INFORMATION

*NITE: National Institute of Technology and Evaluation (JAPAN)

https://www.chem-info.nite.go.jp/en/chem/chrip/chrip_search/srhInput

Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Triethylene glycol monobutyl ether	<i>ErC50 : Raphidocelis</i> > 920 mg/L 72 h	<i>LC50 : Oryzias latipes</i> > 100 mg/L 96 h	<i>EC50 : Daphnia magna</i> > 860 mg/L 48 h

Other data

Chemical Name	Short-term (acute) hazardous to the aquatic environment source information	Long-term (chronic) hazardous to the aquatic environment source information
Triethylene glycol monobutyl ether	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Persistence and degradability No information available

Bioaccumulative potential No information available

Mobility in soil No information available

Hazard to the ozone layer No information available

Section 13: DISPOSAL CONSIDERATIONS**Waste from residues**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated container and contaminated packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14: TRANSPORT INFORMATION

ADR/RID Not regulated

UN number -

Proper shipping name:

UN classification

Subsidiary hazard class

Packing group

Marine pollutant Not applicable

IMDG Not regulated

UN number -

Proper shipping name:

UN classification

Subsidiary hazard class

Packing group

Marine pollutant (Sea) Not applicable

Transport in bulk according to No information available

Annex II of MARPOL 73/78 and

the IBC Code
 IATA Not regulated
 UN number -
 Proper shipping name:
 UN classification
 Subsidiary hazard class
 Packing group
 Environmentally Hazardous Not applicable
 Substance

Section 15: REGULATORY INFORMATION

Japanese regulations

Fire Service Act Category IV, Class III petroleum, dangerous grade 3 water-soluble
Poisonous and Deleterious Substances Control Law Not applicable
Industrial Safety and Health Act Chemical Substances Hazardous to Skin, etc. (Regulations Article 594-2 Paragraph 1)
Industrial Safety and Health Act (2026-) 【2026.4.1~】 Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57)
【2026.4.1~】 Notifiable Substances (Law Art.57-2)
Regulations for the carriage and storage of dangerous goods in ship Not applicable
Civil Aeronautics Law Not applicable
Marine Pollution Prevention Law Enforcement ordinance Appendix No. 1 Noxious liquid substance Category Z
Pollutant Release and Transfer Register Law (2023.4.1-) Not applicable

Industrial Safety and Health Law

Law Name	Chemical Name in Regulation	Weight %	Scheduled enforcement date
Notifiable Substances (Law Art.57-2)	Triethylene glycol monobutyl ether	97.0	2026/4/1

Section 16: OTHER INFORMATION

Key literature references and sources for data etc.

NITE: National Institute of Technology and Evaluation (JAPAN)
https://www.chem-info.nite.go.jp/en/chem/chrip/chrip_search/srhInput
 IATA dangerous Goods Regulations
 RTECS: Registry of Toxic Effects of Chemical Substances
 Japan Industrial Safety and Health Association GHS Model SDS
 Dictionary of Synthetic Organic Chemistry, SSOCJ, Koudansha Scientific Co.Ltd.
 Chemical Dictionary, Kyouritsu Publishing Co., Ltd.
 etc

Record of SDS revisions

The following contents were revised. Product and company identification. Hazards identification. Fire fighting measures. Exposure controls/personal protection. Toxicological information. Ecological information. Regulatory information.

Disclaimer

This SDS is according to JIS Z 7253: 2019. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

GHS Classification is according to JIS Z 7252:2019. *JIS: Japanese Industrial Standards

End of Safety Data Sheet