

MATERIAL SAFETY DATA SHEET

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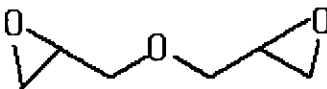
MSDS# AU06-223540-10

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name : Diglycidyl ether

MSDS No. : AU06-223540-10

Chemical Name : Diglycidyl ether



Formula : **C₆H₁₀O₃**

Synonyms : 2,2'-(Oxybis(methylene))bisoxirane

General Use : crosslinker

Manufacturer : DAISO CO., LTD.
Sales Dept.2 Chemicals Division
1-10-8, Edobori, Nishi-ku, Osaka, Japan 550-0002
TEL 81-6-6445-8852, FAX 81-6-6445-8919

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1-10-8, Edobori, Nishi-ku
DAISO CO., LTD.
Sales Dept.2 Chemicals Division

2. HAZARDS IDENTIFICATION

Emergency Overview : Colourless or pale yellow liquid.
WARNING
Combustible liquid
Irritant
Toxic
Sensitize

Potential Health Effects

Inhalation : Dizziness. Shortness of breath. Sore throat. Unconsciousness.
Weakness.

Eye : Redness. Pain. Blurred vision.

Skin : MAY BE ABSORBED! Dry skin. Redness. Roughness. Skin burns.
Pain. Blisters.

Ingestion : Nausea. Vomiting.

Chronic : Repeated or prolonged contact with skin may cause dermatitis.
Repeated or prolonged contact may cause skin sensitization.
Animal tests show that this substance possibly causes toxic effects upon human reproduction.

Physical Hazards : The substance can presumably form explosive peroxides. May explode on heating. Reacts with strong oxidants.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910. 1200).

3. COMPOSITION/INFORMATION ON INGREDIENTS

<i>Component</i>	<i>Content</i>	<i>Formula</i>	<i>CAS#</i>	
Diglycidyl ether	≥ 98 %	C6H10O3	2238-07-5	*1

*1: Hazardous by the OSHA Hazard Communication Standard (29 CFR 1910. 1200).

4. FIRST AID MEASURES

Inhalation	:	Fresh air, rest, Half-upright position, Refer for medical attention
Eye Contact	:	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Skin Contact	:	Remove contaminated clothes, Rinse skin with plenty of water or shower, Refer for medical attention if necessary.
Ingestion	:	Rinse mouth. Give plenty of water to drink. Refer for medical attention.

5. FIRE FIGHTING MEASURES

Extinguishing Media	:	Powder, water spray, foam, carbon dioxide
Hazardous Combustion Products	:	toxic fume (carbon monoxide)
Fire-Fighter Protection	:	Wear self-contained breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	:	Wear self-contained breathing apparatus, chemical safety goggles, rubber boots, and heavy rubber gloves.
Environmental Precautions	:	Prevent spill from entering sewer, watercourses or low areas.
Methods for Cleaning Up	:	Shut off all source of ignition. Wear self-contained breathing apparatus, rubber boots and rubber gloves. Absorb the material on sand or vermiculite and place in a closed disposal container. After completing the above procedures, thoroughly ventilate and wash the exposed place. Remove, clean or dispose of contaminated clothing.

7. HANDLING AND STORAGE

Handling	:	Handle the material in a well ventilated area, do not breath vapour. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Handle materials with suitable protection. ; Maybe readily absorbed through skin. Wash thoroughly after handling.
Storage	:	
Safe condition	:	Store in a cool and dark place. And keep away from fire and sparks.

8. EXPOSURE CONTROLS PERSONAL PROTECTION

Exposure Limit Values

NIOSH REL	:	Diglycidyl ether, CAS 2238-07-5, 0.1 ppm 0.5 mg/m ³
IDLH	:	Not Established.
OSHA PEL	:	Not Established.
ACGIH(2005)	:	Diglycidyl ether, CAS 2238-07-5, TWA 0.1PPM, 0.53mg/m ³

Others

EC (Directive 2000/39/EC)	:	Not Established.
JP JSOH(2005)	:	Not Established.

Exposure Controls

Engineering Controls : Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety and shower. Use adequate ventilation to keep airborne concentrations low.

Personal Protective Equipment

Respiratory Protection	:	Air-purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where air-borne concentrations are expected to exceed exposure limits.
Hand Protection	:	Rubber gloves
Eye Protections	:	Safety goggles
Skin & Body Protection	:	To prevent any contact; wear impervious clothing such as gloves; apron; boots or whole body suits made from neoprene; as appropriate
Others	:	-

Environmental

Exposure Controls : -

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical State	:	Liquid (normal temperature, normal pressure)
Form	:	Not Applicable
Color	:	Colorless or pale yellow
Odors	:	Specific odor
Odor Threshold	:	
pH	:	5.08 (1.0% (w/w) at ambient temperature) [3]
Boiling Point/Range (°F)	:	500°F(260°C) (100kPa) [1]
Flash Point (°F)	:	147.2°F (64°C) [1]
Melting Point/Range (°F)	:	Not Available.

Decomposition Temperature	:	Not Available.
Vapor Pressure (KPa)	:	12 Pa (25 °C) [1]
Density	:	1.1 g/cm ³ (at ambient temperature) [3]
Water Solubility	:	soluble at any ratio [3]
Partition Coefficient (n-octanol/water)	:	Log Kow = -0.85 [4]
Vapor Density	:	1.00 [1]
Explosive	:	Upper Limit - %Lower Limit 1.16% (in air) (Prediction) [2]
Auto-ignition Temperature	:	Not Available.

10. STABILITY AND REACTIVITY

Stability	:	Stable when properly handled and stored.
Conditions to Avoid	:	heat, open flames, sparks and other ignition sources
Materials to Avoid	:	acid, base, ammonia, amine, sodium, oxidizing agent
Reactivity	:	The substance can presumably form explosive peroxides. May explode on heating. Reacts with strong oxidants.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity	:	LD50 (rat, Oral)	450 mg/kg [5]
		LD50 (mouse, Oral)	170 mg/kg [5]
		LC50 (mouse, Inhalation)	30 ppm (4h) [5]
		LC50 (rat, Inhalation)	200 ppm (4h) [5]
		LD50 (rat, Endermatic)	1 g/kg [5]
		LDL0 (rabbit, Endermatic)	1500 mg/kg [5]
		LD50 (mouse, Intravenous)	100 mg/kg [5]
		LDL0 (rabbit, Intravenous)	200 mg/kg [5]
Local Effects	:	Not Available.	
Sensitization	:	This chemical is a strong sensitizer. [6]	
Mutagenicity	:	Salmonella typhimurium 50 µg/plate (±S9) [5]	
Carcinogenicity	:	mouse unreported route TDLO 1300mg/kg [5]	

12. ECOLOGICAL INFORMATION

Mobility	:	Fugacity model level 3 calculations of Diglycidyl ether by EPI Suite ver. 3.12 [4]This chemical would distribute as follows. If released to air: 0.763% in air, 25.9% in water, 73.3% in soil, 0.0474% in sediment. If released to water: below 0.1% in air, 99.8% in water, below 0.1% in soil, 0.183% in sediment. If released to soil: 0.0109% in air, 22.1% in water, 77.8% in soil, 0.0405% in sediment.
Persistence and Degradability	:	Not ready biodegradability estimated by MITI Linear Model Prediction [4]
Bioaccumulative	:	

Potential : Not bioaccumulative (Log Kow (estimated) = -0.85). [4]

13. DISPOSAL CONSIDERATIONS

Waste From Residues : Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated Package(s) : No specific conditions

Do not dump this product into sewers, on the ground or into any body of water.

14. TRANSPORT INFORMATION

US DEPARTMENT OF TRANSPORTATION (DOT)

Proper Shipping Name : Toxic, liquids, organic, n.o.s. (Diglycidyl ether)

Hazard Class or Division : 6.1

Identification Number : UN2810

Packing Group : III

Label(s) Required : 6.1

IMDG (Sea) : Class: 6.1 (Toxic and infectious substances - Toxic substances)
Packing Group: III
UN Number: UN2810
Proper Shipping Name: Toxic liquid organic, n.o.s. (Diglycidyl ether)
Marin Pollutant: NO

ICAO/IATA (Air) : Class: 6.1 (Toxic and infectious substances - Toxic substances)
Packing Group: III
UN Number: UN2810
Proper Shipping Name: Diglycidyl ether

15. REGULATORY INFORMATION

OSHA STATUS:

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910. 1200).

TSCA STATUS (Toxic Substance Control Act):

listed

CERCLA (Comprehensive Emergency Response, Compensation, and Liability Act):

Not applicable

SARA TITLE III (Superfund Amendments and Reauthorization Act):

This material is listed.

SECTION 302 (40 CFR 355) :

listed

We recommend you contact local authorities to determine if there may be other local reporting requirements.

16. OTHER INFORMATION

Caution - substance not yet fully tested.

References:

1. NIOSH(1997) : International Chemical Safety Cards ICSC# 0145
2. : Calculated value by Chetah Ver. 8
3. : in house data
4. : Estimation by EPI Suite (V3.12)
5. : RTECS update: Nov. 2004
6. : HSDB Mar. 2006 check on

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