

Safety Data Sheet DBE-712

Issue date: 12/08/2014 Revision date: 12/22/2023 Version: 2.2

SECTION 1: Identification

1.1. Identification

Product name : DIMETHYLSILOXANE-(60-70% ETHYLENE OXIDE) BLOCK COPOLYMER

Product code : DBE-712
Product form : Substance
Physical state : Liquid

Synonyms : (TRIMETHYLSILOXY)DISILOXANYL]PROPYL ETHER

POLYALKYLENEOXIDE MODIFIED POLYDIMETHYLSILOXANE GLYCOLS, POLYETHYLENE, METHYL 3-[1,3,3,3-TETRAMETHYL-1-POLY(OXY-1,2-ETHANEDIYL), α -METHYL- ω -[3-[1,3,3,3-TETRAMETHYL-1-

[(TRIMETHYLSILYL)OXY]-1-DISILOXANYL]PROPOXY]-

Chemical family : ORGANOSILOXANE

1.2. Recommended use and restrictions on use

Recommended use : Chemical intermediate

1.3. Supplier

GELEST, INC.

11 East Steel Road Morrisville, PA 19067

USA

T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST

info@gelest.com - www.gelest.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Acute toxicity (inhalation:dust,mist) Category 4 H3

Serious eye damage/eye irritation Category 2A

Full text of H statements : see section 16

Precautionary statements (GHS US)

H332 Harmful if inhaled

H319 Causes serious eye irritation

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US)



Signal word (GHS US) : Warning

Hazard statements (GHS US) : H319 - Causes serious eye irritation

H332 - Harmful if inhaled : P261 - Avoid breathing mist.

P264 - Wash hands thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.

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P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing

P312 - Call a doctor if you feel unwell.

P337+P313 - If eye irritation persists: Get medical advice/attention.

2.3. Hazards not otherwise classified (HNOC)

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type : Polymer

Name : DIMETHYLSILOXANE-(60-70% ETHYLENE OXIDE) BLOCK COPOLYMER

CAS-No. : 27306-78-1

Name	Product identifier	%	GHS US classification
Dimethylsiloxane-ethylene oxide block copolymer	CAS-No.: 27306-78-1	> 95	Acute Tox. 4 (Inhalation:dust,mist), H332 Eye Irrit. 2A, H319
Allyloxy(polyethylene oxide), methyl ether	CAS-No.: 27252-80-8	< 5	Acute Tox. 4 (Oral), H302

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical

advice immediately (show the label where possible). If possible show this sheet; if not available

show packaging or label.

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel

unwell, seek medical advice.

First-aid measures after skin contact : Wash with plenty of soap and water.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if

present and easy to do. Continue rinsing. Get medical advice/attention.

First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : Harmful if inhaled. May cause irritation to the respiratory tract. Symptoms/effects after skin contact : May cause skin irritation. May be harmful in contact with skin.

Symptoms/effects after eye contact : Causes serious eye irritation. Symptoms/effects after ingestion : May be harmful if swallowed.

4.3. Immediate medical attention and special treatment, if necessary

No additional information available

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SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Water fog. Foam. Carbon dioxide. Dry chemical.

Unsuitable extinguishing media : None known.

5.2. Specific hazards arising from the chemical

Fire hazard : Irritating fumes and organic acid vapors may develop when material is exposed to elevated

temperatures or open flame.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed

containers.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Avoid

all eye and skin contact and do not breathe vapor and mist.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Wear protective equipment as described in Section 8.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal

protection".

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or

streams.

Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid all eye and skin contact and do not breathe vapor and mist. Use only outdoors or in a well-

ventilated area.

Hygiene measures : Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap

and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed.

Incompatible materials : Oxidizing agent.

Storage area : Store in a well-ventilated place. Store away from heat.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Provide local exhaust or general room ventilation.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Hand protection:

Neoprene or nitrile rubber gloves

Eye protection:

Chemical goggles. Contact lenses should not be worn

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified organic vapor (black cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Clear liquid. Viscous.

Molecular mass : 600 g/mol
Color : Pale yellow.
Odor : No data available
Odor threshold : No data available
pH : No data available
Relative evaporation rate (butyl acetate=1) : No data available

Melting point : 0 °C

Freezing point : No data available

Boiling point : > 205 °C Flash point : 116 °C

Auto-ignition temperature : No data available
Decomposition temperature : No data available
Flammability (solid, gas) : No data available
Vapor pressure : < 5 mm Hg

Relative vapor density at 20°C : No data available

Relative density : 1.01

Solubility : Soluble in water.

Partition coefficient n-octanol/water (Log Pow) : No data available

Partition coefficient n-octanol/water (Log Kow) : > 3.29 > 3.28; > 3.60

Viscosity, kinematic : 20 cSt

Viscosity, dynamic : No data available Explosive properties : No data available Oxidizing properties : No data available Explosion limits : No data available

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9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Heat. Open flame. Sparks.

10.5. Incompatible materials

Oxidizing agent.

10.6. Hazardous decomposition products

Organic acid vapors. Formaldehyde. Silicon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Inhalation:dust,mist: Harmful if inhaled.

DIMETHYLSILOXANE-(60-70% ETHYLENE OXIDE) BLOCK COPOLYMER (27306-78-1)

ATE US (dust, mist) 2.105 mg/l/4h

Allyloxy(polyethylene oxide), methyl ether (27252-80-8)

LD50 oral rat > 500 mg/kg

Dimethylsiloxane-ethylene oxide block copolymer (27306-78-1)

 LD50 oral rat
 4920 μl/kg

 LD50 dermal rat
 > 2000 mg/kg

 LC50 Inhalation - Rat
 2 g/m³ (Exposure time: 4 h)

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitization : Not classified Germ cell mutagenicity : Not classified Carcinogenicity : Not classified

None of the components in this product at concentrations >0.1% are listed by IARC, NTP, OSHA

or ACGIH as a carcinogen.

Reproductive toxicity : Not classified STOT-single exposure : Not classified STOT-repeated exposure : Not classified

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Aspiration hazard : Not classified

Symptoms/effects after inhalation : Harmful if inhaled. May cause irritation to the respiratory tract. Symptoms/effects after skin contact : May cause skin irritation. May be harmful in contact with skin.

Symptoms/effects after eye contact : Causes serious eye irritation. Symptoms/effects after ingestion : May be harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Dimethylsiloxane-ethylene oxide block copolymer (27306-78-1)		
LC50 - Fish [1] 6.8 mg/l (Zebra Fish)		
EC50 - Crustacea [1]	25 mg/l (Daphnia magna)	
ErC50 algae	32 mg/l (Pseudokirchneriella subcapitata)	

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the ozone layer : No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Sewage disposal recommendations

Product/Packaging disposal recommendations

: Do not dispose of waste into sewer.

: Incinerate. Dispose in a safe manner in accordance with local/national regulations. Dispose of

contents/container to licensed waste disposal facility...

Ecological information : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA		
14.1. UN number	14.1. UN number				
3082	Not applicable	3082	3082		
14.2. Proper Shipping Name					
Environmentally hazardous substances, liquid, n.o.s. ((DIMETHYLSILOXANE-(ETHYLENE OXIDE) BLOCK COPOLYMER))	Not applicable	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIMETHYLSILOXANE- (ETHYLENE OXIDE) BLOCK COPOLYMER)	Environmentally hazardous substance, liquid, n.o.s. (DIMETHYLSILOXANE- (ETHYLENE OXIDE) BLOCK COPOLYMER)		

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DOT	TDG		IMDG	IATA
Transport document description				
UN3082 Environmentally hazardous substances, liquid, n.o.s. (DIMETHYLSILOXANE-(ETHYLENE OXIDE) BLOCK COPOLYMER), 9, III	Not applicable		UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIMETHYLSILOXANE- (ETHYLENE OXIDE) BLOCK COPOLYMER), 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (DIMETHYLSILOXANE- (ETHYLENE OXIDE) BLOCK COPOLYMER), 9, III
14.3. Transport hazard class(es	14.3. Transport hazard class(es)			
9	Not applicable		9	9
1 1 1 2 2 2 3 3 3 3 3 3 3 3 3 3	Not applicable		**************************************	**************************************
14.4. Packing group				
III	Not applicable		III	III
14.5. Environmental hazards				
Dangerous for the environment: Yes	Dangerous for the environ	nment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes
No supplementary information availab	ple			

14.6. Special precautions for user

DOT

UN-No.(DOT) : UN3082

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DOT Special Provisions (49 CFR 172.102)

: 8 - A hazardous substance that is not a hazardous waste may be shipped under the shipping description "Other regulated substances, liquid or solid, n.o.s.", as appropriate. In addition, for solid materials, special provision B54 applies.

146 - This description may be used for a material that poses a hazard to the environment but does not meet the definition for a hazardous waste or a hazardous substance, as defined in 171.8 of this subchapter, or any hazard class as defined in Part 173 of this subchapter, if it is designated as environmentally hazardous by the Competent Authority of the country of origin, transit or destination.

173 - An appropriate generic entry may be used for this material.

335 - Mixtures of solids that are not subject to this subchapter and environmentally hazardous liquids or solids may be classified as "Environmentally hazardous substances, solid, n.o.s," UN3077 and may be transported under this entry, provided there is no free liquid visible at the time the material is loaded or at the time the packaging or transport unit is closed. Each transport unit must be leak-proof when used as bulk packaging.

IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).

T4 - 2.65 178.274(d)(2) Normal...... 178.275(d)(3)

TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

TP29 - A portable tank having a minimum test pressure of 1.5 bar (150.0 kPa) may be used provided the calculated test pressure is 1.5 bar or less based on the MAWP of the hazardous materials, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx) : 155

DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 241

DOT Quantity Limitations Passenger aircraft/rail (49 : No limit

CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49

CFR 175.75)

: No limit

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

TDG

Emergency Response Guide (ERG) Number : 171

IMDG

Special provision (IMDG) : 274, 335, 969

Limited quantities (IMDG) : 5 L

Excepted quantities (IMDG) : E1

Packing instructions (IMDG) : LP01, P001

Packing provisions (IMDG) : PP1

IBC packing instructions (IMDG) : IBC03

Tank instructions (IMDG) : T4

Tank special provisions (IMDG) : TP2, TP29

EmS-No. (Fire) : F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE

EmS-No. (Spillage) : S-F - SPILLAGE SCHEDULE Foxtrot - WATER-SOLUBLE MARINE POLLUTANTS

Stowage category (IMDG) : A

IATA

PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y964
PCA limited quantity max net quantity (IATA) : 30kgG

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PCA packing instructions (IATA) : 964
PCA max net quantity (IATA) : 450L
CAO packing instructions (IATA) : 964
CAO max net quantity (IATA) : 450L

Special provision (IATA) : A97, A158, A197

ERG code (IATA) : 9L

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
Allyloxy(polyethylene oxide), methyl ether	27252-80-8	Present	Active	XU
Dimethylsiloxane-ethylene oxide block copolymer	27306-78-1	Present	Active	XU

15.2. International regulations

CANADA

Allyloxy(polyethylene oxide), methyl ether (27252-80-8)

Listed on the Canadian DSL (Domestic Substances List)

Dimethylsiloxane-ethylene oxide block copolymer (27306-78-1)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Allyloxy(polyethylene oxide), methyl ether (27252-80-8)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS (Existing New Chemical Substances) inventory

Listed on KECL/KECI (Korean Existing Chemicals Inventory)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

Listed on the NCI (Vietnam - National Chemical Inventory)

Listed on Thailand Existing Chemicals Inventory (DIW)

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Dimethylsiloxane-ethylene oxide block copolymer (27306-78-1)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS (Existing New Chemical Substances) inventory

Listed on KECL/KECI (Korean Existing Chemicals Inventory)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

Listed on Thailand Existing Chemicals Inventory (DIW)

Listed on the NCI (Vietnam - National Chemical Inventory)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

Full text of H-phrases::

H302	Harmful if swallowed	
H319	Causes serious eye irritation	
H332	Harmful if inhaled	

Abbreviations and acronyms

: Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemcial Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor.

Hazard Rating

Physical

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)

 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Prepared by safety and environmental affairs.

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SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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