



DIMETHYLSILOXANE-(45-50% ETHYLENE OXIDE) BLOCK COPOLYMER

Safety Data Sheet DBE-411

Date of issue: 12/08/2014

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Version: 2.0

SECTION 1: Identification

1.1. Identification

Product name : DIMETHYLSILOXANE-(45-50% ETHYLENE OXIDE) BLOCK COPOLYMER
 Product code : DBE-411
 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

H332 Harmful if inhaled

Serious eye damage/eye irritation Category 2

H319 Causes serious eye irritation

Hazardous to the aquatic environment - Acute Hazard Category 2

H401 Toxic to aquatic life

Full text of H statements : see section 16

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
 H401 - Toxic to aquatic life

Precautionary statements (GHS US) :

P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P261 - Avoid breathing mist.
 P264 - Wash hands thoroughly after handling.
 P271 - Use only outdoors or in a well-ventilated area.
 P273 - Avoid release to the environment.
 P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
 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.
 P501 - Dispose of contents/container to licensed waste disposal facility.

2.3. Hazards not otherwise classified (HNOC)

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

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SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type : Polymer
Name : DIMETHYLSILOXANE-(45-50% 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 Aquatic Acute 2, H401
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

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.

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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.

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 : 400 - 500 g/mol
- Color : Pale yellow.
- Odor : No data available
- Odor threshold : No data available
- Refractive index : 1.425
- 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 : < 110 °C

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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	: 0.94
% Volatiles	: < 5 %
Solubility	: Soluble in water.
Log Pow	: No data available
Log Kow	: > 3.29 >3.28; >3.60
Viscosity, kinematic	: 5 - 10 cSt
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion limits	: No data available

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 : Not classified

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ATE US (dust, mist)	2.105 mg/l/4h
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Allyloxy(polyethylene oxide), methyl ether (27252-80-8)

LD50 oral rat	> 500 mg/kg
ATE US (oral)	500 mg/kg body weight

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

LD50 oral rat	4920 µl/kg
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat (mg/l)	2 g/m ³ (Exposure time: 4 h)
ATE US (oral)	4920 mg/kg body weight
ATE US (vapors)	2 mg/l/4h
ATE US (dust, mist)	2 mg/l/4h

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.

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Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
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 Daphnia 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 : Do not dispose of waste into sewer.
Product/Packaging disposal recommendations : Incinerate. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number

UN-No.(DOT) : 3082
DOT NA no. UN3082

14.2. UN proper shipping name

Transport document description : UN3082 Environmentally hazardous substances, liquid, n.o.s. (DIMETHYLSILOXANE-(ETHYLENE OXIDE) BLOCK COPOLYMER), 9, III
Proper Shipping Name (DOT) : Environmentally hazardous substances, liquid, n.o.s. (DIMETHYLSILOXANE-(ETHYLENE OXIDE) BLOCK COPOLYMER)
Class (DOT) : 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140
Packing group (DOT) : III - Minor Danger
Hazard labels (DOT) : 9 - Class 9 (Miscellaneous dangerous materials)



DOT Packaging Non Bulk (49 CFR 173.xxx) : 203
DOT Packaging Bulk (49 CFR 173.xxx) : 241
DOT Packaging Exceptions (49 CFR 173.xxx) : 155
DOT Symbols : G - Identifies PSN requiring a technical name

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14.3. Additional information

Emergency Response Guide (ERG) Number : 171

Other information : No supplementary information available.

Transport by sea

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

Air transport

DOT Quantity Limitations Passenger aircraft/rail : No limit
(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : No limit
CFR 175.75)

SECTION 15: Regulatory information

15.1. US Federal regulations

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

Listed on the United States TSCA (Toxic Substances Control Act) inventory

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

Listed on the United States TSCA (Toxic Substances Control Act) inventory

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 on the AICS (Australian Inventory of Chemical Substances)
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 the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

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

Listed on the AICS (Australian Inventory of Chemical Substances)
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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)

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
H401	Toxic to aquatic life

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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.: Chemical 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

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)
Physical : 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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