Synthetic Brake Fluid DOT 4

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)
Issue date: 8/12/2025 Revision date: 1/14/2026 Supersedes: 9/8/2025 Version: 4.0

SECTION 1 Identification

1.1. Product identifier

Product name : Synthetic Brake Fluid DOT 4
Part Number : 10827

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

No additional information available

1.4. Supplier's details

Lucas Oil Products, Inc.
3199 Harrison Way NW
Corydon, IN 47112
USA
T 800-342-2512
sds@lucasoil.com - www.LucasOil.com

1.5. Emergency phone number

Emergency number : For Chemical Emergency Call ChemTel 24hr/day 7days/week
Within USA, Canada, Puerto Rico and US Virgin Islands: 1-800-255-3924
International: 1-813-248-0585
(collect calls accepted)

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Serious eye damage/eye irritation, Category 1	H318	Causes serious eye damage.
Reproductive toxicity, Category 2	H361	Suspected of damaging fertility or the unborn child.
Specific target organ toxicity — Repeated exposure, Category 2	H373	May cause damage to organs through prolonged or repeated exposure.

Full text of H statements : see section 16

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger
Hazard statements (GHS US) : H318 - Causes serious eye damage
H361 - Suspected of damaging fertility or the unborn child
H373 - May cause damage to organs through prolonged or repeated exposure
Precautionary statements (GHS US) : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe dust, fume, gas, mist, vapors, spray.
P280 - Wear protective gloves, protective clothing, eye protection, face protection, and hearing

protection.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P310 - Immediately call a poison center or doctor.
P314 - Get medical advice or attention if you feel unwell.
P405 - Store locked up.
P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Triethylene glycol butyl ether	CAS-No.: 143-22-6	15 - 40*	Eye Dam. 1, H318
Diethylene glycol	CAS-No.: 111-46-6	10 - 30*	Repr. 2, H361
Triethylene glycol monomethyl ether borate ester	CAS-No.: 30989-05-0	10 - 30*	Repr. 2, H361
Polyethylene glycol monobutyl ether	CAS-No.: 9004-77-7	7 - 13*	Eye Dam. 1, H318
Diethylene glycol monobutyl ether	CAS-No.: 112-34-5	3 - 7*	Eye Irrit. 2, H319 STOT SE 3, H336 STOT RE 2, H373
Diethyleneglycolmonoethyl ether	CAS-No.: 111-90-0	1 - 5*	Eye Irrit. 2B, H320

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret
Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.
Personal protection for first-aid responders. : First-aiders should consider self-protection and use the recommended personal protective equipment (see section 8).

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : None under normal conditions.
Symptoms/effects after skin contact : None under normal conditions.
Symptoms/effects after eye contact : Serious damage to eyes.
Symptoms/effects after ingestion : None under normal conditions.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : No fire hazard.
Explosion hazard : No direct explosion hazard.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Ventilate spillage area. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

Environmental precautions : Avoid release to the environment.

6.2. Methods and materials for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information : Dispose of materials or solid residues at an authorized site.

For further information refer to section 13.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.
Hygiene measures	:	Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
Additional hazards when processed	:	Not expected to present a significant hazard under anticipated conditions of normal use.

7.2. Conditions for safe storage, including incompatibilities

Technical measures	:	Keep in a cool, well-ventilated place away from heat.
Storage conditions	:	Store locked up.
Packaging materials	:	Always store product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

Diethylene glycol monobutyl ether (112-34-5)	
USA - ACGIH® - Threshold Limit Values	
Local name	Diethylene glycol monobutyl ether
ACGIH® TLV® TWA	67.5 mg/m³ (IFV - Inhalable fraction and vapor)
	10 ppm (Inhalable fraction and vapor)
Remark (ACGIH®)	TLV® Basis: Hematologic, liver & kidney eff
Regulatory reference	ACGIH 2025

8.2. Appropriate engineering controls

Appropriate engineering controls	:	Ensure good ventilation of the work station.
Environmental exposure controls	:	Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:
Wear recommended personal protective equipment.

Hand protection:
Protective gloves

Eye protection:
Safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
[In case of inadequate ventilation] wear respiratory protection.

Personal protective equipment symbol(s):

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Liquid
Color	:	Mixture contains one or more component(s) which have the following color(s): Colourless Light brown Solid: white On exposure to air: yellow to light brown Colourless to light yellow Colourless to white
Odor	:	There may be no odor warning properties, odor is subjective and inadequate to warn of overexposure. Mixture contains one or more component(s) which have the following odor: Mild odour Almost odourless Unpleasant odour Irritating/pungent odour Ammonia odour Ether-like odour Pleasant odour Fruity odour Repulsive odour Smell of fish
Odor threshold	:	No data available
pH	:	> 9 – ≤ 11
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	> 203 °C
Flammability (solid, gas)	:	Not applicable.
Vapor pressure	:	No data available
Relative vapor density at 20°C	:	No data available
Relative density	:	No data available
Solubility	:	No data available
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Explosion limits	:	No data available
Particle characteristics	:	No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

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

Triethylene glycol butyl ether (143-22-6)	
LD50 oral rat	5170 mg/kg body weight (according to BASF-internal standards, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 oral	5170 mg/kg
LD50 dermal rabbit	3540 mg/kg body weight (24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))
LD50 dermal	3540 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	50 mg/l/4h
ATE US (oral)	5170 mg/kg body weight
ATE US (dermal)	3540 mg/kg body weight
ATE US (dust, mist)	50 mg/l/4h

Triethylene glycol monomethyl ether borate ester (30989-05-0)	
LD50 oral rat	> 2000 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal)

Diethylene glycol (111-46-6)	
LD50 oral rat	16500 mg/kg body weight (Rat, Male / female, Experimental value, Oral, 5 day(s))
LD50 oral	15600 mg/kg
LD50 dermal rabbit	13300 mg/kg body weight (Rabbit, Experimental value, Dermal, 14 day(s))
LD50 dermal	13300 mg/kg
LC50 Inhalation - Rat	> 4.6 mg/l air (4 h, Rat, Experimental value, (maximum achievable concentration), Inhalation (aerosol), 14 day(s))
ATE US (oral)	15600 mg/kg body weight
ATE US (dermal)	13300 mg/kg body weight

Polyethylene glycol monobutyl ether (9004-77-7)	
LD50 oral rat	> 2000 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	3540 mg/kg body weight (Modification of Draize 1959 method, 24 h, Rabbit, Male, Read-across, Dermal, 14 day(s))

Polyethylene glycol monobutyl ether (9004-77-7)	
ATE US (dermal)	3540 mg/kg body weight

Diethylene glycol monobutyl ether (112-34-5)	
LD50 oral rat	5660 mg/kg
LD50 oral	2410 – 5530 mg/kg body weight (Equivalent or similar to OECD 401, Mouse, Male, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	2764 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))
LD50 dermal	2764 mg/kg
ATE US (oral)	2410 mg/kg body weight
ATE US (dermal)	2764 mg/kg body weight

Diethyleneglycolmonoethyl ether (111-90-0)	
LD50 oral rat	5490 mg/kg Source: GESTIS
LD50 oral	6031 mg/kg body weight (Equivalent or similar to OECD 401, Mouse, Male, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	9143 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))
LD50 dermal	4200 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	5.24 mg/l/4h
ATE US (oral)	5490 mg/kg body weight
ATE US (dermal)	4200 mg/kg body weight
ATE US (dust, mist)	5.24 mg/l/4h

Skin corrosion/irritation : Not classified
pH: > 9 – ≤ 11

Triethylene glycol butyl ether (143-22-6)	
pH	No data available in the literature

Triethylene glycol monomethyl ether borate ester (30989-05-0)	
pH	7 (17 %, OECD 117: Partition Coefficient (n-octanol/water), HPLC method)

Diethylene glycol (111-46-6)	
pH	5 – 8 (50 %)

Polyethylene glycol monobutyl ether (9004-77-7)	
pH	7

Diethylene glycol monobutyl ether (112-34-5)	
pH	No data available in the literature

Diethyleneglycolmonoethyl ether (111-90-0)	
pH	No data available in the literature

Serious eye damage/irritation : Causes serious eye damage.
pH: > 9 – ≤ 11

Triethylene glycol butyl ether (143-22-6)	
pH	No data available in the literature

Triethylene glycol monomethyl ether borate ester (30989-05-0)	
pH	7 (17 %, OECD 117: Partition Coefficient (n-octanol/water), HPLC method)

Diethylene glycol (111-46-6)	
pH	5 – 8 (50 %)

Polyethylene glycol monobutyl ether (9004-77-7)	
pH	7

Diethylene glycol monobutyl ether (112-34-5)	
pH	No data available in the literature

Diethyleneglycolmonoethyl ether (111-90-0)	
pH	No data available in the literature

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Diethylene glycol (111-46-6)	
NOAEL (chronic,oral,animal/male,2 years)	1210 mg/kg body weight Animal: rat, Animal sex: male
NOAEL (chronic,oral,animal/female,2 years)	1160 mg/kg body weight Animal: rat, Animal sex: female

Reproductive toxicity : Suspected of damaging fertility or the unborn child.

Diethylene glycol monobutyl ether (112-34-5)	
NOAEL (animal/male, F0/P)	> 452 mg/kg body weight Animal: rat, Animal sex: male, Guideline: other:
NOAEL (animal/female, F0/P)	> 470 mg/kg body weight Animal: rat, Animal sex: female, Guideline: other:

STOT-single exposure : Not classified

Diethylene glycol monobutyl ether (112-34-5)	
STOT-single exposure	May cause drowsiness or dizziness.

STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

Triethylene glycol butyl ether (143-22-6)	
LOAEL (oral,rat,90 days)	1200 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (oral,rat,90 days)	400 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (dermal,rat/rabbit,90 days)	4000 mg/kg body weight Animal: rat, Guideline: other:

Triethylene glycol monomethyl ether borate ester (30989-05-0)	
NOAEL (oral,rat,90 days)	≥ 1000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents), Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents), Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)

Diethylene glycol (111-46-6)	
LOAEL (oral,rat,90 days)	40000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)

Polyethylene glycol monobutyl ether (9004-77-7)	
LOAEL (oral,rat,90 days)	1200 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (oral,rat,90 days)	400 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)

Diethylene glycol monobutyl ether (112-34-5)	
NOAEL (oral,rat,90 days)	250 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents), Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents), Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)
NOAEL (dermal,rat/rabbit,90 days)	< 200 mg/kg body weight Animal: rat, Guideline: other:, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Diethyleneglycolmonoethyl ether (111-90-0)	
NOAEL (dermal,rat/rabbit,90 days)	300 mg/kg body weight Animal: rabbit, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

Aspiration hazard : Not classified

Triethylene glycol butyl ether (143-22-6)	
Viscosity, kinematic	9.2 mm²/s (25 °C)
Triethylene glycol monomethyl ether borate ester (30989-05-0)	
Viscosity, kinematic	16.2 mm²/s (20 °C, OECD 114: Viscosity of Liquids)
Diethylene glycol (111-46-6)	
Viscosity, kinematic	No data available in the literature
Polyethylene glycol monobutyl ether (9004-77-7)	
Viscosity, kinematic	9.2 mm²/s (25 °C)
Diethylene glycol monobutyl ether (112-34-5)	
Viscosity, kinematic	No data available in the literature
Diethyleneglycolmonoethyl ether (111-90-0)	
Viscosity, kinematic	No data available in the literature

Symptoms/effects after inhalation : None under normal conditions.
Symptoms/effects after skin contact : None under normal conditions.
Symptoms/effects after eye contact : Serious damage to eyes.
Symptoms/effects after ingestion : None under normal conditions.

SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short–term (acute) : Not classified.

Hazardous to the aquatic environment, long–term (chronic) : Not classified.

Triethylene glycol butyl ether (143-22-6)	
LC50 - Fish [1]	2200 – 4600 mg/l (DIN 38412-15, 96 h, Leuciscus idus, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	> 500 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
LC50 - Fish [2]	2400 mg/l Test organisms (species): Pimephales promelas
EC50 72h - Algae [1]	1589 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	3211 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
ErC50 algae	840 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)
NOEC chronic crustacea	100 mg/l
NOEC chronic algae	86 mg/l

Triethylene glycol monomethyl ether borate ester (30989-05-0)	
LC50 - Fish [1]	> 222.2 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value, GLP)
EC50 - Crustacea [1]	< 211.2 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)
LC50 - Fish [2]	> 1010 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [2]	> 960 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 224.4 mg/l Test organisms (species): other:
EC50 72h - Algae [2]	> 1020 mg/l Test organisms (species): other:
EC50 96h - Algae [1]	430 mg/l Source: IUCLID
ErC50 algae	> 224.4 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)

Diethylene glycol (111-46-6)	
LC50 - Fish [1]	75200 mg/l (96 h, Pimephales promelas, Flow-through system, Experimental value, Lethal)
EC50 - Crustacea [1]	> 10000 mg/l (DIN 38412-11, 24 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
EC50 96h - Algae [1]	9362 mg/l (ECOSAR, Algae, QSAR)
EC50 96h - Algae [2]	9362 mg/l Test organisms (species): other:
NOEC (chronic)	≥ 1000 mg/l Test organisms (species): Americamysis bahia (previous name: Mysidopsis bahia) Duration: '23 d'

Polyethylene glycol monobutyl ether (9004-77-7)	
LC50 - Fish [1]	> 1800 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Scophthalmus maximus, Semi-static system, Salt water, Experimental value, GLP)
EC50 - Crustacea [1]	> 3200 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Semi-static system, Fresh water, Experimental value, GLP)
EC50 72h - Algae [1]	391 mg/l (ISO 10253, Skeletonema costatum, Salt water, Experimental value, Growth rate)

Diethylene glycol monobutyl ether (112-34-5)	
LC50 - Fish [1]	1300 mg/l (Equivalent or similar to OECD 203, 96 h, Lepomis macrochirus, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	> 100 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
EC50 96h - Algae [1]	> 100 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
ErC50 algae	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 96 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Nominal concentration)

Diethyleneglycolmonoethyl ether (111-90-0)	
LC50 - Fish [1]	6010 mg/l (Equivalent or similar to OECD 203, 96 h, Ictalurus punctatus, Flow-through system, Fresh water, Experimental value, Lethal)
EC50 - Crustacea [1]	3340 mg/l
EC50 72h - Algae [1]	14861 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
ErC50 algae	14861 mg/l (Equivalent or similar to OECD 201, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)
NOEC chronic crustacea	7.38 mg/l

12.2. Persistence and degradability

Synthetic Brake Fluid DOT 4	
Persistence and degradability	Not rapidly degradable

Triethylene glycol butyl ether (143-22-6)	
Persistence and degradability	Readily biodegradable in water.

Triethylene glycol monomethyl ether borate ester (30989-05-0)	
Persistence and degradability	Readily biodegradable in water.

Diethylene glycol (111-46-6)	
Persistence and degradability	Biodegradable in the soil, Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.02 g O_2/g substance
Chemical oxygen demand (COD)	1.51 g O_2/g substance
ThOD	1.51 g O_2/g substance

Polyethylene glycol monobutyl ether (9004-77-7)	
Persistence and degradability	Readily biodegradable in water.

Diethylene glycol monobutyl ether (112-34-5)	
Persistence and degradability	Readily biodegradable in water.

Diethyleneglycolmonoethyl ether (111-90-0)	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.2 g O_2/g substance
Chemical oxygen demand (COD)	1.85 g O_2/g substance
ThOD	1.9078849 g O_2/g substance

Diethyleneglycolmonoethyl ether (111-90-0)	
BOD (% of ThOD)	0.11 (Calculated value)

12.3. Bioaccumulative potential

Triethylene glycol butyl ether (143-22-6)	
Partition coefficient n-octanol/water (Log Pow)	0.51 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Triethylene glycol monomethyl ether borate ester (30989-05-0)	
Partition coefficient n-octanol/water (Log Pow)	-0.62 – -0.55 (Experimental value, Equivalent or similar to OECD 117)
Bioaccumulative potential	Not bioaccumulative.

Diethylene glycol (111-46-6)	
BCF - Fish [1]	100 l/kg (3 day(s), Leuciscus melanotus, Static system, Fresh water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	-1.98 (Calculated)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Polyethylene glycol monobutyl ether (9004-77-7)	
Partition coefficient n-octanol/water (Log Pow)	0.436 (Experimental value, EU Method A.8: Partition Coefficient, 25.5 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Diethylene glycol monobutyl ether (112-34-5)	
Partition coefficient n-octanol/water (Log Pow)	1 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Diethyleneglycolmonoethyl ether (111-90-0)	
Partition coefficient n-octanol/water (Log Pow)	-0.54 (Literature, 20 °C)
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

Triethylene glycol butyl ether (143-22-6)	
Surface tension	61.2 mN/m (20 °C, 0.1 g/l)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.25 – 1 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil.

Triethylene glycol monomethyl ether borate ester (30989-05-0)	
Mobility in soil	0.007477 Source: EPISUITE
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	-2.1 (log Koc, Calculated value)
Ecology - soil	Highly mobile in soil.

Diethylene glycol (111-46-6)	
Surface tension	48.5 mN/m

Diethylene glycol (111-46-6)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0 (log Koc, SRC PCKOCWIN v2.0, QSAR)
Ecology - soil	Highly mobile in soil.

Polyethylene glycol monobutyl ether (9004-77-7)	
Surface tension	61.4 mN/m (20 °C)
Ecology - soil	Low potential for adsorption in soil.

Diethylene glycol monobutyl ether (112-34-5)	
Surface tension	67.5 mN/m (20 °C, 1 g/l, OECD 115: Surface Tension of Aqueous Solutions)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.64 – 1 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil.

Diethyleneglycolmonoethyl ether (111-90-0)	
Surface tension	71.5 mN/m (20 °C, 0.1 %, OECD 115: Surface Tension of Aqueous Solutions)
Ecology - soil	Highly mobile in soil.

12.5. Other adverse effects

Ozone : Not classified

Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Regional waste regulation : Disposal must be done according to official regulations.

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Sewage disposal recommendations : Disposal must be done according to official regulations.

Product/Packaging disposal recommendations : Disposal must be done according to official regulations.

Additional information : Do not re-use empty containers.

Ecological waste information : The waste of the product should be considered as hazardous as the product itself, with the likelihood of impacting the environment in the same way. Consider the handling and disposal of the waste as defined by the product itself.

SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
Not regulated for transport			
14.2. Proper Shipping Name			
Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)			
Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group			
Not regulated	Not regulated	Not regulated	Not regulated

DOT	TDG	IMDG	IATA
14.5. Environmental hazards			
Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available			

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT
Not regulated

TDG
Not regulated

IMDG
Not regulated

IATA
Not regulated

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

Triethylene glycol butyl ether (143-22-6)

Listed on the Canadian DSL (Domestic Substances List)

Triethylene glycol monomethyl ether borate ester (30989-05-0)

Listed on the Canadian DSL (Domestic Substances List)

Diethylene glycol (111-46-6)

Listed on the Canadian DSL (Domestic Substances List)

Polyethylene glycol monobutyl ether (9004-77-7)

Listed on the Canadian DSL (Domestic Substances List)

Diethylene glycol monobutyl ether (112-34-5)
Listed on the Canadian DSL (Domestic Substances List)

Diethyleneglycolmonoethyl ether (111-90-0)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Diethylene glycol (111-46-6)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Diethylene glycol monobutyl ether (112-34-5)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Diethyleneglycolmonoethyl ether (111-90-0)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. State regulations

WARNING: This product can expose you to chemicals including Diethanolamine, which is known to the State of California to cause cancer, and Ethylene glycol monomethyl ether, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

SECTION 16 Other information

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

Revision date : 1/14/2026

Issue date : 8/12/2025

Full text of hazard classes and H-statements	
H318	Causes serious eye damage
H319	Causes serious eye irritation
H320	Causes eye irritation
H336	May cause drowsiness or dizziness
H361	Suspected of damaging fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.