GARD DOT 3 BRAKE FLUID

Safety Data Sheet

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SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Product name : GARD DOT 3 BRAKE FLUID
Product code : 504266

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Brake fluid

1.4. Supplier's details

Martin Lubricants
484 East 6th St.
Smackover, AR 71762

1.5. Emergency phone number

Emergency number : CHEMTREC (800) 424-9300

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Acute toxicity (dermal), Category 4	H312	Harmful in contact with skin.
Serious eye damage/eye irritation, Category 1	H318	Causes serious eye damage.
Reproductive toxicity, Category 1B	H360	May damage fertility or the unborn child.
Specific target organ toxicity — Repeated exposure, Category 2	H373	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard, Category 1	H304	May be fatal if swallowed and enters airways.

Full text of H-statements: see section 16

2.2. Label elements

GHS US labelling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger
Hazard statements (GHS US) : H304 - May be fatal if swallowed and enters airways
H312 - Harmful in contact with skin
H318 - Causes serious eye damage
H360 - May damage 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, vapours, spray.
P280 - Wear protective gloves, protective clothing, eye protection, face protection, and hearing protection.

P301+P310 - If swallowed: Immediately call a poison center or doctor.
P302+P352 - If on skin: Wash with plenty of water.
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.
P312 - Call a poison center or doctor if you feel unwell.
P314 - Get medical advice or attention if you feel unwell.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P331 - Do NOT induce vomiting.
P362+P364 - Take off contaminated clothing and wash it before reuse.
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	%
Butyl triglycolether	CAS-No.: 143-22-6	5 – 50
3,6,9,12-Tetraoxahexadecane-1-ol	CAS-No.: 1559-34-8	5 – 20
Alpha-hydro-omega-hydroxypoly(oxy-1,2-ethanediyl),e12000	CAS-No.: 25322-68-3	5 – 20
2-(2-Butoxyethoxy)ethanol	CAS-No.: 112-34-5	5 – 20
Tetraethylene glycol monomethyl ether	CAS-No.: 23783-42-8	5 – 20
Poly(oxy-1,2-ethanediyl), alpha-butyl-omega-hydroxy-	CAS-No.: 9004-77-7	5 – 20
Diethylene glycol	CAS-No.: 111-46-6	5 – 15
2-(2-Methoxyethoxy)ethanol	CAS-No.: 111-77-3	< 5
Diethyleneglycolmonoethyl ether	CAS-No.: 111-90-0	< 5

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 you feel unwell, seek medical advice.
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 eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.
Self protection of the first-aider : Even though no specific hazards are defined, first-aiders should wear eye protection, gloves and disposable half mask. Consider additional protection if repeated or prolonged exposition is likely.

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 : None under normal conditions.
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.

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 without risks if possible.
Methods for cleaning up : Take up liquid spill into absorbent material.

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. Wear personal protective equipment.
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 : Keep cool. Protect from sunlight.
Packaging materials : Always store product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

2-(2-Butoxyethoxy)ethanol (112-34-5)

USA - ACGIH® - Threshold Limit Values

Local name	Diethylene glycol monobutyl ether
ACGIH® TLV® TWA	10 ppm (Inhalable fraction and vapor)
Remark (ACGIH®)	TLV® Basis: Hematologic, liver & kidney eff
Regulatory reference	ACGIH 2022

8.2. Appropiate 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 insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Liquid.
Colour	:	Colourless to yellow
Odour	:	Mild
Odour threshold	:	No data available
pH	:	7.5 – 11
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	246 °C
Flash point	:	135 °C
Relative evaporation rate (butylacetate=1)	:	< 0.01
Flammability (solid, gas)	:	Not applicable.
Vapour pressure	:	< 0.01 mm Hg
Relative vapour density at 20°C	:	No data available
Relative density	:	1.025 – 1.075
Solubility	:	No data available
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	310 °C
Decomposition temperature	:	No data available
Viscosity, kinematic	:	2 mm²/s at 100 C
Explosive 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. Likely routes of exposure

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Harmful in contact with skin.
Acute toxicity (inhalation) : Not classified

GARD DOT 3 BRAKE FLUID	
ATE US (dermal)	2000 mg/kg bodyweight

Butyl triglycolether (143-22-6)	
LD50 oral rat	5170 mg/kg bodyweight (according to BASF-internal standards, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	3540 mg/kg bodyweight (24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))
ATE US (oral)	5170 mg/kg bodyweight
ATE US (dermal)	3540 mg/kg bodyweight

3,6,9,12-Tetraoxahexadecane-1-ol (1559-34-8)	
LD50 oral rat	2630 mg/kg bodyweight (BASF test, Rat, Male / female, Experimental value, Oral, 7 day(s))
LD50 dermal rat	> 4000 mg/kg (Rat, Dermal)
ATE US (oral)	2630 mg/kg bodyweight

Alpha-hydro-omega-hydroxypoly(oxy-1,2-ethanediyl),e12000 (25322-68-3)	
LD50 oral rat	600 mg/kg
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Remarks on results: other:
LD50 dermal rabbit	> 20000 mg/kg (Rabbit, Inconclusive, insufficient data, Dermal)
ATE US (oral)	600 mg/kg bodyweight

2-(2-Butoxyethoxy)ethanol (112-34-5)	
LD50 oral rat	5660 mg/kg
LD50 oral	2410 – 5530 mg/kg bodyweight (Equivalent or similar to OECD 401, Mouse, Male, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	2764 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))
ATE US (oral)	3970 mg/kg bodyweight
ATE US (dermal)	2764 mg/kg bodyweight

Tetraethylene glycol monomethyl ether (23783-42-8)	
LD50 oral rat	> 15000 mg/kg (Equivalent or similar to OECD 401, 14 day(s), Rat, Female, Experimental value, Oral, 14 day(s))
LD50 dermal rat	2000 mg/kg Source: SIDS
LD50 dermal rabbit	7100 mg/kg bodyweight (24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))

Tetraethylene glycol monomethyl ether (23783-42-8)	
ATE US (dermal)	2000 mg/kg bodyweight

Poly(oxy-1,2-ethanediyl), alpha-butyl-omega-hydroxy- (9004-77-7)	
LD50 oral rat	> 2000 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	3540 mg/kg bodyweight (Modification of Draize 1959 method, 24 h, Rabbit, Male, Read-across, Dermal, 14 day(s))
ATE US (dermal)	3540 mg/kg bodyweight

Diethylene glycol (111-46-6)	
LD50 oral rat	16500 mg/kg bodyweight (Rat, Male / female, Experimental value, Oral, 5 day(s))
LD50 dermal rabbit	13300 mg/kg bodyweight (Rabbit, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 4.6 mg/l air (Other, 4 h, Rat, Weight of evidence, Inhalation (aerosol), 14 day(s))
ATE US (oral)	16500 mg/kg bodyweight
ATE US (dermal)	13300 mg/kg bodyweight
ATE US (dust,mist)	1.5 mg/l/4h

2-(2-Methoxyethoxy)ethanol (111-77-3)	
LD50 oral	7128 mg/kg bodyweight (Equivalent or similar to OECD 401, Mouse, Male, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	9404 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male, Experimental value, Skin, 14 day(s))
ATE US (oral)	7128 mg/kg bodyweight
ATE US (dermal)	9404 mg/kg bodyweight

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

Skin corrosion/irritation : Not classified
pH: 7.5 – 11

Butyl triglycolether (143-22-6)	
pH	No data available in the literature

Alpha-hydro-omega-hydroxypoly(oxy-1,2-ethanediyl),e12000 (25322-68-3)	
pH	3 – 4.45 (1 %, 25 °C)

2-(2-Butoxyethoxy)ethanol (112-34-5)	
pH	No data available in the literature

Poly(oxy-1,2-ethanediyl), alpha-butyl-omega-hydroxy- (9004-77-7)	
pH	7

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

2-(2-Methoxyethoxy)ethanol (111-77-3)	
pH	Not relevant, expert judgement

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

Serious eye damage/irritation : Causes serious eye damage.
pH: 7.5 – 11

Butyl triglycolether (143-22-6)	
pH	No data available in the literature

Alpha-hydro-omega-hydroxypoly(oxy-1,2-ethanediyl),e12000 (25322-68-3)	
pH	3 – 4.45 (1 %, 25 °C)

2-(2-Butoxyethoxy)ethanol (112-34-5)	
pH	No data available in the literature

Poly(oxy-1,2-ethanediyl), alpha-butyl-omega-hydroxy- (9004-77-7)	
pH	7

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

2-(2-Methoxyethoxy)ethanol (111-77-3)	
pH	Not relevant, expert judgement

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

Respiratory or skin sensitisation : 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 bodyweight Animal: rat, Animal sex: male
NOAEL (chronic, oral, animal/female, 2 years)	1160 mg/kg bodyweight Animal: rat, Animal sex: female

Reproductive toxicity : May damage fertility or the unborn child.
STOT-single exposure : Not classified
STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

Butyl triglycolether (143-22-6)	
NOAEL (dermal, rat/rabbit, 90 days)	> 1000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

Alpha-hydro-omega-hydroxypoly(oxy-1,2-ethanediyl),e12000 (25322-68-3)	
LOAEL (oral, rat, 90 days)	16000 mg/kg bodyweight Animal: rat, Guideline: other:
NOAEL (oral, rat, 90 days)	8000 mg/kg bodyweight Animal: rat, Guideline: other:

Alpha-hydro-omega-hydroxypoly(oxy-1,2-ethanediyl),e12000 (25322-68-3)	
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	1 mg/l air Animal: rat, Guideline: other:

2-(2-Butoxyethoxy)ethanol (112-34-5)	
NOAEL (oral, rat, 90 days)	250 mg/kg bodyweight 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)

Poly(oxy-1,2-ethanediyl), alpha-butyl-omega-hydroxy- (9004-77-7)	
LOAEL (oral, rat, 90 days)	1200 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (oral, rat, 90 days)	400 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)

Diethylene glycol (111-46-6)	
LOAEL (oral, rat, 90 days)	40000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

2-(2-Methoxyethoxy)ethanol (111-77-3)	
LOAEL (oral, rat, 90 days)	1800 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)
NOAEL (oral, rat, 90 days)	900 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents), Remarks on results: other:
NOAEC (inhalation, rat, vapour, 90 days)	> 1.06 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)

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

Aspiration hazard : May be fatal if swallowed and enters airways.

GARD DOT 3 BRAKE FLUID	
Viscosity, kinematic	2 mm²/s at 100 C
Hydrocarbon	Yes

Butyl triglycolether (143-22-6)	
Viscosity, kinematic	9.2 mm²/s (25 °C)

3,6,9,12-Tetraoxahexadecane-1-ol (1559-34-8)	
Hydrocarbon	Yes

2-(2-Butoxyethoxy)ethanol (112-34-5)	
Viscosity, kinematic	No data available in the literature

Tetraethylene glycol monomethyl ether (23783-42-8)	
Viscosity, kinematic	11.038 mm²/s
Hydrocarbon	Yes

Poly(oxy-1,2-ethanediyl), alpha-butyl-omega-hydroxy- (9004-77-7)	
Viscosity, kinematic	9.2 mm²/s (25 °C)

Diethylene glycol (111-46-6)	
Viscosity, kinematic	No data available in the literature
2-(2-Methoxyethoxy)ethanol (111-77-3)	
Viscosity, kinematic	No data available in the literature
Hydrocarbon	Yes
Diethyleneglycolmonoethyl ether (111-90-0)	
Viscosity, kinematic	No data available in the literature
Hydrocarbon	Yes

Symptoms/effects after inhalation : None under normal conditions.
Symptoms/effects after skin contact : None under normal conditions.
Symptoms/effects after eye contact : None under normal conditions.
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 nor 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

Butyl triglycolether (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)
EC50 72h - Algae [1]	780 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	840 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis 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)	> 100 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
3,6,9,12-Tetraoxahexadecane-1-ol (1559-34-8)	
LC50 - Fish [1]	> 1409 mg/l (96 h, Salmo gairdneri, Similar product)
EC50 - Crustacea [1]	> 1000 mg/l (48 h, Daphnia magna, Similar product)
EC50 72h - Algae [1]	780 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	840 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	> 1000 mg/l (Selenastrum capricornutum, Similar product)

Alpha-hydro-omega-hydroxypoly(oxy-1,2-ethanediyl),e12000 (25322-68-3)	
LC50 - Fish [1]	> 20000 mg/l Source: ECOTOX
LC50 - Other aquatic organisms [1]	> 1000 mg/l (96 h)
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna
EC50 96h - Algae [1]	> 100 mg/l Test organisms (species): other:
NOEC (chronic)	17475.27 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	13671.59 mg/l Test organisms (species): other: Duration: '28 d'

2-(2-Butoxyethoxy)ethanol (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)

Tetraethylene glycol monomethyl ether (23783-42-8)	
LC50 - Fish [1]	> 10000 mg/l (DIN 38412: German standard methods for the examination of water, waste water and sludge, 96 h, Leuciscus idus, Static system, Fresh water, Read-across, Nominal concentration)
EC50 - Crustacea [1]	22900 mg/l (Equivalent or similar to OECD 202, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
EC50 72h - Algae [1]	> 500 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
ErC50 algae	> 500 mg/l (UBA, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Nominal concentration)

Poly(oxy-1,2-ethanediyl), alpha-butyl-omega-hydroxy- (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 (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]	6500 – 13000 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
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'

2-(2-Methoxyethoxy)ethanol (111-77-3)	
LC50 - Fish [1]	5741 mg/l (EPA method, Equivalent or similar to OECD 203, 96 h, Pimephales promelas, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	1192 mg/l (US EPA, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Lethal)
EC50 96h - Algae [1]	> 1000 mg/l (Equivalent or similar to OECD 201, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Biomass)

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]	3940 – 4670 mg/l Source: IUCLID
EC50 72h - Algae [1]	14861 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis 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)

12.2. Persistence and degradability

GARD DOT 3 BRAKE FLUID	
Persistence and degradability	Not rapidly degradable

Butyl triglycolether (143-22-6)	
Persistence and degradability	Readily biodegradable in water.

3,6,9,12-Tetraoxahexadecane-1-ol (1559-34-8)	
Persistence and degradability	Readily biodegradable in water.
ThOD	2.05 g O_2/g substance

Alpha-hydro-omega-hydroxypoly(oxy-1,2-ethanediyl),e12000 (25322-68-3)	
Persistence and degradability	Non degradable in the soil.

2-(2-Butoxyethoxy)ethanol (112-34-5)	
Persistence and degradability	Readily biodegradable in water.

Tetraethylene glycol monomethyl ether (23783-42-8)	
Persistence and degradability	Readily biodegradable in water.

Poly(oxy-1,2-ethanediyl), alpha-butyl-omega-hydroxy- (9004-77-7)	
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

2-(2-Methoxyethoxy)ethanol (111-77-3)	
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
BOD (% of ThOD)	0.11 (Calculated value)

12.3. Bioaccumulative potential

Butyl triglycolether (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).

3,6,9,12-Tetraoxahexadecane-1-ol (1559-34-8)	
Partition coefficient n-octanol/water (Log Pow)	-0.26 (QSAR, 25 °C)
Bioaccumulative potential	Not bioaccumulative.

Alpha-hydro-omega-hydroxypoly(oxy-1,2-ethanediyl),e12000 (25322-68-3)	
BCF - Fish [1]	3.2 (Other, Pisces, Calculated value)
Partition coefficient n-octanol/water (Log Pow)	-0.96 – -0.7 (Weight of evidence approach, Other, 30 °C)
Bioaccumulative potential	No bioaccumulation data available.

2-(2-Butoxyethoxy)ethanol (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).

Tetraethylene glycol monomethyl ether (23783-42-8)	
Partition coefficient n-octanol/water (Log Pow)	-1.5 (20 °C)
Bioaccumulative potential	Not bioaccumulative.

Poly(oxy-1,2-ethanediyl), alpha-butyl-omega-hydroxy- (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 (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).

2-(2-Methoxyethoxy)ethanol (111-77-3)	
Partition coefficient n-octanol/water (Log Pow)	-0.47 (Experimental value, Equivalent or similar to OECD 117, 20 °C)
Bioaccumulative potential	Not bioaccumulative.

Diethyleneglycolmonoethyl ether (111-90-0)	
Partition coefficient n-octanol/water (Log Pow)	-0.54 (Literature, 20 °C)

Diethyleneglycolmonoethyl ether (111-90-0)	
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

Butyl triglycolether (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.

3,6,9,12-Tetraoxahexadecane-1-ol (1559-34-8)	
Ecology - soil	No (test)data on mobility of the substance available.

Alpha-hydro-omega-hydroxypoly(oxy-1,2-ethanediyl),e12000 (25322-68-3)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1 (log Koc, Other, Calculated value)
Ecology - soil	Highly mobile in soil.

2-(2-Butoxyethoxy)ethanol (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)	0.642 – 1 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil.

Tetraethylene glycol monomethyl ether (23783-42-8)	
Surface tension	52 – 70 mN/m (25 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil.

Poly(oxy-1,2-ethanediyl), alpha-butyl-omega-hydroxy- (9004-77-7)	
Surface tension	61.4 mN/m (20 °C)
Ecology - soil	Low potential for adsorption in soil.

Diethylene glycol (111-46-6)	
Surface tension	48.5 mN/m
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0 (log Koc, SRC PCKOCWIN v2.0, QSAR)
Ecology - soil	Highly mobile in soil.

2-(2-Methoxyethoxy)ethanol (111-77-3)	
Surface tension	64.5 mN/m (25 °C, 1 g/l)
Ecology - soil	Low potential for adsorption 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
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

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
Butyl triglycolether	143-22-6	Present	Active	
3,6,9,12-Tetraoxahexadecane-1-ol	1559-34-8	Present	Active	
Alpha-hydro-omega-hydroxypoly(oxy-1,2-ethanediyl),e12000	25322-68-3	Present	Active	XU
2-(2-Butoxyethoxy)ethanol	112-34-5	Present	Active	
Tetraethylene glycol monomethyl ether	23783-42-8	Present	Active	
Poly(oxy-1,2-ethanediyl), alpha-butyl-omega-hydroxy-	9004-77-7	Present	Active	XU
Diethylene glycol	111-46-6	Present	Active	
2-(2-Methoxyethoxy)ethanol	111-77-3	Present	Active	
Diethyleneglycolmonoethyl ether	111-90-0	Present	Active	

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

Butyl triglycolether (143-22-6)

Listed on the Canadian DSL (Domestic Substances List)

3,6,9,12-Tetraoxahexadecane-1-ol (1559-34-8)

Listed on the Canadian DSL (Domestic Substances List)

Alpha-hydro-omega-hydroxypoly(oxy-1,2-ethanediyl),e12000 (25322-68-3)

Listed on the Canadian DSL (Domestic Substances List)

2-(2-Butoxyethoxy)ethanol (112-34-5)

Listed on the Canadian DSL (Domestic Substances List)

Tetraethylene glycol monomethyl ether (23783-42-8)

Listed on the Canadian DSL (Domestic Substances List)

Poly(oxy-1,2-ethanediyl), alpha-butyl-omega-hydroxy- (9004-77-7)

Listed on the Canadian DSL (Domestic Substances List)

Diethylene glycol (111-46-6)
Listed on the Canadian DSL (Domestic Substances List)

2-(2-Methoxyethoxy)ethanol (111-77-3)
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

2-(2-Butoxyethoxy)ethanol (112-34-5)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

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

2-(2-Methoxyethoxy)ethanol (111-77-3)
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

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

Component	State or local regulations
Diethylene glycol(111-46-6)	U.S. - Pennsylvania - RTK (Right to Know) List
2-(2-Methoxyethoxy)ethanol(111-77-3)	U.S. - Massachusetts - Right To Know List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16 Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Revision date : 5/20/2026
Issue date : 5/19/2026

Full text of hazard classes and H-statements	
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin

Full text of hazard classes and H-statements	
H318	Causes serious eye damage
H360	May damage fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure

Safety Data Sheet (SDS), USA

Information provided in this Safety Data Sheet is considered accurate and reliable based on information issued from internal and outside sources to the best of Martin Operating Partnership L.P.'s knowledge; however, Martin Operating Partnership L.P. makes no representations, guarantees or warranties, expressed or implied, of merchantability or fitness for the particular purpose, regarding the accuracy of such information or the result to be obtained from the use thereof or as to the sufficiency of information herein presented. Martin Operating Partnership L.P. assumes no responsibility for injury to recipient or to third persons or for any damage to any property and recipient assumes all such risks.

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