

SECTION 1: Identification of the hazardous chemical or mixture and of the supplier or manufacturer**1.1. GHS product identifier**

Product name : Synthetic Brake Fluid DOT 4
Part Number : 30827

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

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: Hazards identification**2.1. Classification of the substance or mixture****GHS MX classification**

Acute toxicity (dermal) Category 5	H313	May be harmful in contact with skin.
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 MX labelling**

Hazard pictograms (GHS MX) :



Signal word (GHS MX) :

Danger

Hazard statements (GHS MX) :

H313 - May be harmful in contact with skin

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 MX) :

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.

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P280 - Wear protective gloves/protective clothing/eye protection/face 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.
P312 - Call a POISON CENTER or doctor if you feel unwell.
P314 - Get medical advice/attention if you feel unwell.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Other hazards which do not result in classification

Adverse physicochemical, human health and environmental effects : Suspected of damaging fertility or the unborn child, May cause damage to organs through prolonged or repeated exposure, Harmful in contact with skin, Causes serious eye damage

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS MX classification
Triethylene glycol butyl ether	CAS-No.: 143-22-6	≥ 20 – < 40	Acute Tox. 5 (Dermal), H313 Eye Dam. 1, H318
Triethyleneglycol monoethyl ether	CAS-No.: 112-50-5	≥ 10 – < 40	Acute Tox. 5 (Dermal), H313
Triethylene glycol monomethyl ether borate ester	CAS-No.: 30989-05-0	≥ 5 – < 20	Acute Tox. 5 (Oral), H303 Acute Tox. 5 (Dermal), H313 Repr. 2, H361
Triethylene glycol monomethyl ether	CAS-No.: 112-35-6	≥ 1 – < 20	Acute Tox. 5 (Dermal), H313
Diethylene glycol	CAS-No.: 111-46-6	≥ 10 – < 20	Acute Tox. 4 (Inhalation:dust,mist), H332 Repr. 2, H361
Polyethylene glycol monobutyl ether	CAS-No.: 9004-77-7	≥ 0.5 – < 20	Acute Tox. 5 (Oral), H303 Acute Tox. 5 (Dermal), H313 Eye Dam. 1, H318
Methoxypolyethyleneglycols	CAS-No.: 9004-74-4	< 10	Acute Tox. 5 (Oral), H303 Acute Tox. 5 (Dermal), H313
Polyethylene glycol 200-600	CAS-No.: 25322-68-3	≥ 1 – < 10	Acute Tox. 5 (Dermal), H313
Diethyleneglycolmonoethyl ether	CAS-No.: 111-90-0	≥ 1 – < 5	Acute Tox. 5 (Dermal), H313 Eye Irrit. 2B, H320
Diethylene glycol monobutyl ether	CAS-No.: 112-34-5	≥ 0.5 – < 1	Acute Tox. 5 (Oral), H303 Acute Tox. 5 (Dermal), H313 Eye Irrit. 2, H319 STOT SE 3, H336 STOT RE 2, H373

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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. Call a poison center/doctor/physician if you feel unwell.
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. Take off contaminated clothing.
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	: May be harmful in contact with skin.
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

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable 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 actions 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: Measures to be taken in case of accidental spillage or accidental leakage

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.
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6.1.1. 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, eyes and clothing.

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6.1.2. 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.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material 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.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.
- 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. Do not get in eyes, on skin, or on clothing.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any 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

No additional information available

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 (PPE)

- 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)



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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: No data available
Odor	: No data available
Odor threshold	: No data available
pH	: > 9 – ≤ 11
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 203 °C
Flammability (solid, gas)	: Not applicable
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
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
Partition coefficient n-octanol/water (Log Kow)	: No data available
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

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.

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : May be harmful in contact with skin.
Acute toxicity (inhalation) : Not classified

Synthetic Brake Fluid DOT 4	
ATE MX (dermal)	2604.824 mg/kg body weight
Triethylene glycol butyl ether (143-22-6)	
LD50 oral	5170 mg/kg
LD50 oral rat	5170 mg/kg body weight (according to BASF-internal standards, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal	3540 mg/kg
LD50 dermal rabbit	3540 mg/kg body weight (24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat (Dust/Mist)	50 mg/l/4h
ATE MX (oral)	5170 mg/kg body weight
ATE MX (dermal)	3540 mg/kg body weight
ATE MX (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)
ATE MX (oral)	2500 mg/kg body weight
ATE MX (dermal)	2500 mg/kg body weight
Diethylene glycol (111-46-6)	
LD50 oral	15600 mg/kg
LD50 oral rat	16500 mg/kg body weight (Rat, Male / female, Experimental value, Oral, 5 day(s))
LD50 dermal	13300 mg/kg
LD50 dermal rabbit	13300 mg/kg body weight (Rabbit, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 4.6 mg/l air (4 h, Rat, Experimental value, (maximum achievable concentration), Inhalation (aerosol), 14 day(s))
ATE MX (oral)	15600 mg/kg body weight
ATE MX (dermal)	13300 mg/kg body weight
ATE MX (dust, mist)	1.5 mg/l/4h
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))

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ATE MX (oral)	2500 mg/kg body weight
ATE MX (dermal)	3540 mg/kg body weight
Diethylene glycol monobutyl ether (112-34-5)	
LD50 oral	2410 – 5530 mg/kg body weight (Equivalent or similar to OECD 401, Mouse, Male, Experimental value, Oral, 14 day(s))
LD50 oral rat	5660 mg/kg
LD50 dermal	2764 mg/kg
LD50 dermal rabbit	2764 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))
ATE MX (oral)	3970 mg/kg body weight
ATE MX (dermal)	2764 mg/kg body weight
Triethyleneglycol monoethyl ether (112-50-5)	
LD50 oral rat	10610 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	3540 mg/kg body weight (24 h, Rabbit, Male, Read-across, Dermal, 14 day(s))
ATE MX (oral)	10610 mg/kg body weight
ATE MX (dermal)	3540 mg/kg body weight
Triethylene glycol monomethyl ether (112-35-6)	
LD50 oral	11300 mg/kg
LD50 oral rat	> 10500 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral)
LD50 dermal	7400 mg/kg
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat, Guideline: EU Method B.3 (Acute Toxicity (Dermal))
LD50 dermal rabbit	7.1 ml/kg (24 h, Rabbit, Male, Experimental value, Dermal)
LC50 Inhalation - Rat (Dust/Mist)	50 mg/l/4h
ATE MX (oral)	11300 mg/kg body weight
ATE MX (dermal)	2500 mg/kg body weight
ATE MX (dust, mist)	50 mg/l/4h
Methoxypolyethyleneglycols (9004-74-4)	
LD50 oral rat	> 2000 mg/kg body weight (Rat, Oral)
LD50 dermal rabbit	> 2000 mg/kg body weight (Rabbit, Dermal)
ATE MX (oral)	2500 mg/kg body weight
ATE MX (dermal)	2500 mg/kg body weight
Polyethylene glycol 200-600 (25322-68-3)	
LD50 oral rat	> 15000 mg/kg (Rat, Oral)
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal rabbit	> 20000 mg/kg (Rabbit, Dermal)
ATE MX (dermal)	2500 mg/kg body weight

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Diethyleneglycolmonoethyl ether (111-90-0)	
LD50 oral	6031 mg/kg body weight (Equivalent or similar to OECD 401, Mouse, Male, Experimental value, Oral, 14 day(s))
LD50 oral rat	5490 mg/kg Source: GESTIS
LD50 dermal	4200 mg/kg
LD50 dermal rabbit	9143 mg/kg body weight (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/4h
ATE MX (oral)	5490 mg/kg body weight
ATE MX (dermal)	4200 mg/kg body weight
ATE MX (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

Triethyleneglycol monoethyl ether (112-50-5)	
pH	No data available in the literature

Triethylene glycol monomethyl ether (112-35-6)	
pH	7

Methoxypolyethyleneglycols (9004-74-4)	
pH	4 – 7 (5 %)

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)

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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
Triethyleneglycol monoethyl ether (112-50-5)	
pH	No data available in the literature
Triethylene glycol monomethyl ether (112-35-6)	
pH	7
Methoxypolyethyleneglycols (9004-74-4)	
pH	4 – 7 (5 %)
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:
Polyethylene glycol 200-600 (25322-68-3)	
NOAEL (animal/female, F0/P)	1690 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:

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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.
Triethyleneglycol monoethyl ether (112-50-5)	
NOAEL (dermal, rat/rabbit, 90 days)	> 1000 mg/kg body weight Animal: rabbit, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)
Triethylene glycol monomethyl ether (112-35-6)	
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)
Polyethylene glycol 200-600 (25322-68-3)	
LOAEL (oral, rat, 90 days)	16000 mg/kg body weight Animal: rat, Guideline: other:
NOAEL (oral, rat, 90 days)	8000 mg/kg body weight Animal: rat, Guideline: other:
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	1 mg/l air Animal: rat, Guideline: other:
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 mm ² /s (25 °C)
Triethylene glycol monomethyl ether borate ester (30989-05-0)	
Viscosity, kinematic	16.2 mm ² /s (20 °C, OECD 114: Viscosity of Liquids)
Diethylene glycol (111-46-6)	
Viscosity, kinematic	No data available in the literature

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Polyethylene glycol monobutyl ether (9004-77-7)	
Viscosity, kinematic	9.2 mm ² /s (25 °C)
Diethylene glycol monobutyl ether (112-34-5)	
Viscosity, kinematic	No data available in the literature
Triethyleneglycol monoethyl ether (112-50-5)	
Viscosity, kinematic	No data available in the literature
Triethylene glycol monomethyl ether (112-35-6)	
Viscosity, kinematic	7 mm ² /s Temp.: 'other:' Parameter: 'kinematic viscosity (in mm ² /s)'
Methoxypolyethyleneglycols (9004-74-4)	
Viscosity, kinematic	3.391 – 312.394 mm ² /s
Diethyleneglycolmonoethyl ether (111-90-0)	
Viscosity, kinematic	No data available in the literature

SECTION 12: Ecological information

12.1. Toxicity

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)
LC50 - Fish [2]	2400 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	> 500 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
ErC50 algae	840 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)
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)
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)
LC50 - Fish [2]	> 1010 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
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)

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Triethylene glycol monomethyl ether borate ester (30989-05-0)	
EC50 - Crustacea [2]	> 960 mg/l Test organisms (species): Daphnia magna
ErC50 algae	> 224.4 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)
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
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)
ErC50 algae	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 96 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 96h - Algae [1]	> 100 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
Triethyleneglycol monoethyl ether (112-50-5)	
LC50 - Fish [1]	> 10000 mg/l (96 h, Pimephales promelas, Static system, Experimental value, Nominal concentration)
ErC50 algae	> 500 mg/l (UBA, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Weight of evidence, Nominal concentration)
EC50 72h - Algae [1]	> 500 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 96h - Algae [1]	7000 mg/l Test organisms (species): other:
Triethylene glycol monomethyl ether (112-35-6)	
LC50 - Fish [1]	> 10000 mg/l Source: DIN 38412 Teil L15, IUCLID

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Triethylene glycol monomethyl ether (112-35-6)	
EC50 - Crustacea [1]	> 500 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
ErC50 algae	> 500 mg/l (72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value)
EC50 72h - Algae [1]	> 500 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

Polyethylene glycol 200-600 (25322-68-3)	
LC50 - Fish [1]	> 5000 mg/l (24 h, Carassius auratus)
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna
EC50 96h - Algae [1]	> 100 mg/l Test organisms (species): other:
NOEC chronic fish	13671.59 mg/l Test organisms (species): other: Duration: '28 d'
NOEC (chronic)	17475.27 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

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
ErC50 algae	14861 mg/l (Equivalent or similar to OECD 201, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 72h - Algae [1]	14861 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
NOEC chronic crustacea	7.38 mg/l

12.2. Persistence and degradability

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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.

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Triethyleneglycol monoethyl ether (112-50-5)	
Persistence and degradability	Readily biodegradable in water.
Triethylene glycol monomethyl ether (112-35-6)	
Persistence and degradability	Non degradable in the soil, Readily biodegradable in water.
Methoxypolyethyleneglycols (9004-74-4)	
Persistence and degradability	Biodegradability in water: no data available.
Polyethylene glycol 200-600 (25322-68-3)	
Persistence and degradability	Biodegradability in water: no data available.
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	
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).
Triethyleneglycol monoethyl ether (112-50-5)	
Partition coefficient n-octanol/water (Log Pow)	0.51 (Weight of evidence approach, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

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Triethylene glycol monomethyl ether (112-35-6)	
Partition coefficient n-octanol/water (Log Pow)	-1.12 (Practical experience/observation, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C)
Bioaccumulative potential	Not bioaccumulative.
Methoxypolyethyleneglycols (9004-74-4)	
Partition coefficient n-octanol/water (Log Pow)	-2 Source: Quantitative Structure Activity Relation
Bioaccumulative potential	No bioaccumulation data available.
Polyethylene glycol 200-600 (25322-68-3)	
Partition coefficient n-octanol/water (Log Pow)	-1.2
Bioaccumulative potential	Not bioaccumulative.
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
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.

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Triethyleneglycol monoethyl ether (112-50-5)	
Surface tension	52 mN/m (25 °C, 9 g/l)
Ecology - soil	Low potential for adsorption in soil.
Triethylene glycol monomethyl ether (112-35-6)	
Surface tension	31.4 mN/m
Ecology - soil	No (test)data on mobility of the substance available.
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

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
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.
Regional waste regulation	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with NOM / UN RTDG / IMDG / IATA

NOM	UN RTDG	IMDG	IATA
14.1. UN number			
Not applicable	Not applicable	Not regulated	Not regulated
14.2. Proper Shipping Name			
Not applicable	Not applicable	Not regulated	Not regulated
14.3. Transport hazard class(es)			
Not applicable	Not applicable	Not regulated	Not regulated
14.4. Packing group			
Not applicable	Not applicable	Not regulated	Not regulated
14.5. Environmental hazards			
Not applicable	Not applicable	Not regulated	Not regulated
No supplementary information available			

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14.6. Special precautions for user

NOM

Not applicable

UN RTDG

Not applicable

IMDG

Not regulated

IATA

Not regulated

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. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

Diethylene glycol (111-46-6):

Listed in the INSQ (National Inventory of Chemical Substances)

Diethylene glycol monobutyl ether (112-34-5):

Listed in the INSQ (National Inventory of Chemical Substances)

Triethyleneglycol monoethyl ether (112-50-5):

Listed in the INSQ (National Inventory of Chemical Substances)

Triethylene glycol monomethyl ether (112-35-6):

Listed in the INSQ (National Inventory of Chemical Substances)

Diethyleneglycolmonoethyl ether (111-90-0):

Listed in the INSQ (National Inventory of Chemical Substances)

International regulations

Triethylene glycol butyl ether (143-22-6):

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Listed on the Canadian DSL (Domestic Substances List)

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

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Listed on the Canadian DSL (Domestic Substances List)

Diethylene glycol (111-46-6):

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Listed on the Canadian DSL (Domestic Substances List)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

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

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Listed on the Canadian DSL (Domestic Substances List)

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Diethylene glycol monobutyl ether (112-34-5):

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Listed on the Canadian DSL (Domestic Substances List)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Triethyleneglycol monoethyl ether (112-50-5):

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Listed on the Canadian DSL (Domestic Substances List)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Triethylene glycol monomethyl ether (112-35-6):

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Listed on the Canadian DSL (Domestic Substances List)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Methoxypolyethyleneglycols (9004-74-4):

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Listed on the Canadian DSL (Domestic Substances List)

Polyethylene glycol 200-600 (25322-68-3):

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Listed on the Canadian DSL (Domestic Substances List)

Diethyleneglycolmonoethyl ether (111-90-0):

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Listed on the Canadian DSL (Domestic Substances List)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

SECTION 16: Other information including those related to the preparation and updating of safety data sheets

Issue date : 8/12/2025
Revision date : 1/14/2026
Supersedes : 9/8/2025

Full text of hazard classes and H-statements

H303	May be harmful if swallowed
H313	May be harmful in contact with skin
H318	Causes serious eye damage
H319	Causes serious eye irritation
H320	Causes eye irritation
H332	Harmful if inhaled
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), Mexico

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.