SAFETY DATA SHEET
(in accordance with Regulation (EU) 2020/878)

DOT5.1 Y DOT4

Version 1 Date of compilation: 14/02/2022
Version 2 (replaces version 1) Revision date: 08/04/2024 **Print date: 18/05/2024**

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING.

1.1 Product identifier.
Product Name: DOT5.1 Y DOT4
Product Code: N016
UFI: TC10-E0QU-R00R-NJ20

1.2 Relevant identified uses of the substance or mixture and uses advised against.
Universal brake fluid.

Uses advised against:
Uses other than those recommended.

1.3 Details of the supplier of the safety data sheet.

Company: **NAVALI JOSE LASTRA CISNEROS**
Address: C/ DEL POZO, 8
City: 49002 - ZAMORA
Province: ZAMORA
Telephone: +34 980 532985
E-mail: navali@navali.es

1.4 Emergency telephone number: +34 980 532985 (Only available during office hours; Monday-Friday; 08:00-18:00)
general EU emergency numbers (112 / 116117)
ESPAÑA :Servicio de Información Toxicológica (Instituto Nacional de Toxicología y Ciencias Forenses) Teléfono: +34 91 5620420. Información en español (24h/365 días). Únicamente con la finalidad de proporcionar respuesta sanitaria en caso de urgencia.
FRANCE : ORFILA (INRS) : + 33 (0)1 45 42 59 59. 24 heures sur 24 et 7 jours sur 7.
CAV Policlinico "Umberto I"Roma V.le del Policlinico, 155 161T.:06-49978000 .Az. Osp. "Careggi" U.O. Tossicologia Medica Firenze Largo Brambilla, 3 50134 055-7947819.Osp. Niguarda Ca' Granda Milano Piazza Ospedale Maggiore,3 20162 02-66101029. Az. Osp. "A. Cardarelli" Napoli Via A. Cardarelli, 9 80131 081-5453333
PORTUGAL: Em caso de intoxicação contactar o Centro de Informação Antivenenos (CIAV) (+351) 800 250 250. Atendimento médico 24 horas por dia, 7 dias por semana.

SECTION 2: HAZARDS IDENTIFICATION.

2.1 Classification of the substance or mixture.
In accordance with Regulation (EC) No 1272/2008:
Eye Irrit. 2 : Causes serious eye irritation.

2.2 Label elements.
Labelling in accordance with Regulation (EC) No 1272/2008:
Pictograms:



Signal Word:
Warning

Hazard statements:
H319 Causes serious eye irritation.

Precautionary statements:
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read carefully and follow all instructions.
P264 Wash thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection/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.
P337+P313 If eye irritation persists: Get medical advice/attention.

2.3 Other hazards.
The mixture does not contain substances classified as PBT.
The mixture does not contain substances classified as vPvB.
The mixture does not contain any endocrine disrupting properties substances.

The product may have the following additional risks:
The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS.

3.1 Substances.
Not applicable.

3.2 Mixtures.
Substances posing a danger to health or the environment in accordance with the Regulation (EC) No. 1272/2008, assigned a Community exposure limit in the workplace, and classified as PBT/vPvB or included in the Candidate List:

Identifiers	Name	Concentrate	(*)Classification - Regulation (EC) No 1272/2008	
			Classification	Specifics concentration limits and Acute toxicity estimate
Index No: 603-183-00-0 CAS No: 143-22-6 EC No: 205-592-6 Registration No: 01-2119475107-38-XXXX	2-[2-(2-butoxyethoxy)ethoxy]ethanol, TEGBE, triethylene glycol monobutylether, butoxytriethylene glycol	>=10% < 25%	Eye Dam. 1, H318	Eye Dam. 1, H318: C ≥ 30 % Eye Irrit. 2, H319: 20 % ≤ C < 30 %
Index No: 603-140-00-6 CAS No: 111-46-6 EC No: 203-872-2 Registration No: 01-2119457857-21-XXXX	[2] 2,2' -oxybisethanol, diethylene glycol	>=10% < 25%	Acute Tox. 4 *, H302	-
Index No: 603-096-00-8 CAS No: 112-34-5 EC No: 203-961-6 Registration No: 01-2119475104-44-XXXX	[1] [2] 2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether	>= 2,5% < 10%	Eye Irrit. 2, H319	Dermal: ETA = >2000 mg/kg bw Inhalation: ETA = >20000 mg/m3 (Vapours) Oral: ETA = >5000 mg/Kg bw
Index No: 603-107-00-6 CAS No: 111-77-3 EC No: 203-906-6 Registration No: 01-2119475100-52-XXXX	[1] [2] 2-(2-methoxyethoxy)ethanol, diethylene glycol monomethyl ether	>1% < 2,5%	Repr. 1B, H360D	Repr. 1B, H360D: C ≥ 3 %

(*) *The complete text of the H phrases is given in section 16 of this Safety Data Sheet.*
** See Regulation (EC) No. 1272/2008, Annex VI, section 1.2.*
[1] Substance with a European Union exposure limit in the workplace (see section 8.1).
[2] Substance with a national workplace exposure limit (see section 8.1).

SECTION 4: FIRST AID MEASURES.

4.1 Description of first aid measures.
In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

Inhalation.
Take the victim into open air; keep them warm and calm. If breathing is irregular or stops, perform artificial respiration.

Eye contact.
Remove contact lenses, if present and if it is easy to do. Wash eyes with plenty of clean and cool water for at least 10 minutes while pulling eyelids up, and seek medical assistance. Dont let the person to rub the affected eye.

Skin contact.
Remove contaminated clothing. Wash skin vigorously with water and soap or a suitable skin cleaner. NEVER use solvents or thinners.

Ingestion.
If accidentally ingested, seek immediate medical attention. Keep calm. NEVER induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed.
Irritant Product, repeated or prolonged contact with skin or mucous membranes can cause redness, blisters or dermatitis, inhalation of spray mist or particles in suspension may cause irritation of the respiratory tract, some symptoms may not be immediate.

4.3 Indication of any immediate medical attention and special treatment needed.
In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious. Cover the affected area with a dry sterile bandage. Protect the affected area from pressure or friction.

SECTION 5: FIREFIGHTING MEASURES.

The product does not present any particular risk in case of fire.

5.1 Extinguishing media.
Suitable extinguishing media:
Extinguisher powder or CO2. In case of more serious fires, also alcohol-resistant foam and water spray.

Unsuitable extinguishing media:
Do not use a direct stream of water to extinguish. In the presence of electrical voltage, you cannot use water or foam as extinguishing media.

5.2 Special hazards arising from the substance or mixture.
Special risks.
Exposure to combustion or decomposition products can be harmful to your health.

5.3 Advice for firefighters.
Use water to cool tanks, cisterns, or containers close to the heat source or fire. Take wind direction into account. Prevent the products used to fight the fire from going into drains, sewers, or waterways.

Fire protection equipment.
According to the size of the fire, it may be necessary to use protective suits against the heat, individual breathing equipment, gloves, protective goggles or facemasks, and boots.

SECTION 6: ACCIDENTAL RELEASE MEASURES.

6.1 Personal precautions, protective equipment and emergency procedures.
For exposure control and individual protection measures, see section 8.

6.2 Environmental precautions.
Product not classified as hazardous for the environment, avoid spillage as much as possible.

6.3 Methods and material for containment and cleaning up.
Contain and collect spillage with inert absorbent material (earth, sand, vermiculite, Kieselguhr...) and clean the area immediately with a suitable decontaminant.

Deposit waste in closed and suitable containers for disposal, in compliance with local and national regulations (see section 13).

6.4 Reference to other sections.
For exposure control and individual protection measures, see section 8.
For later elimination of waste, follow the recommendations under section 13.

SECTION 7: HANDLING AND STORAGE.

7.1 Precautions for safe handling.
For personal protection, see section 8.
In the application area, smoking, eating, and drinking must be prohibited.
Follow legislation on occupational health and safety.
Never use pressure to empty the containers. They are not pressure-resistant containers. Keep the product in containers made of a material identical to the original.

7.2 Conditions for safe storage, including any incompatibilities.
Store according to local legislation. Observe indications on the label. Store the containers between 5 and 25 º C, in a dry and well-ventilated place, far from sources of heat and direct solar light. Keep far away from ignition points. Keep away from oxidising agents and from highly acidic or alkaline materials. Do not smoke. Prevent the entry of non-authorised persons. Once the containers are open, they must be carefully closed and placed vertically to prevent spills.

The product is not affected by Directive 2012/18/EU (SEVESO III).

7.3 Specific end use(s).
Not available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION.

8.1 Control parameters.

Work exposure limit for:

Name	CAS No.	Country	Limit value	ppm	mg/m³
2,2' -oxybisethanol, diethylene glycol	111-46-6	Deutschland [1] (n/a)	**Eight hours**	10	44
			Short term	20	88
		España [2]	**Eight hours**	10	44
			Short term	40	176
		United Kingdom [3]	**Eight hours**	23	101
			Short term		
		Sverige [4] (n/a)	**Eight hours**	10	45
			Short term	20	90
2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether	112-34-5	Deutschland [1] (n/a)	**Eight hours**	10	67
			Short term	20	134
		España [2]	**Eight hours**	10	67,5
			Short term	15	101,2
		European Union [5]	**Eight hours**	10	67,5
			Short term	15	101,2
		France [6]	**Eight hours**	10	67,5
			Short term	15	101,2
		United Kingdom [3]	**Eight hours**	10	67,5
			Short term	15	101,2
		Italia [7]	**Eight hours**	10	67,5
			Short term	15	101,2
		Portugal [8] (n/a)	**Eight hours**	10	67,5
			Short term	15	101,2
2-(2-methoxyethoxy)ethanol, diethylene glycol monomethyl ether	111-77-3	Deutschland [1] (n/a)	**Eight hours**	10	50
			Short term	80	400
		España [2]	**Eight hours**	10(vía dérmica)	50,1(vía dérmica)

			Short term		
		European Union [5]	**Eight hours**	10 (skin)	50,1 (skin)
			Short term		
		France [6]	**Eight hours**	10 (Risque de pénétration percutanée)	50,1 (Risque de pénétration percutanée)
			Short term		
		United Kingdom [3]	**Eight hours**	10	50,1
			Short term		
		Italia [7]	**Eight hours**	10	50,1
			Short term		
		Portugal [8] (n/a)	**Eight hours**	10 (Cutânea)	50,1 (Cutânea)
			Short term		

[1] Laut Grenzwerte in der Luft am Arbeitsplatz "Luftgrenzwerte" verabschiedet vom Bundesminister für Arbeit und Sozialordnung im Bundesarbeitsblatt.
[2] Según la lista de Valores Límite Ambientales de Exposición Profesional adoptados por el Instituto Nacional de Seguridad y Salud en el Trabajo (INSST) para el año 2023.
[3] According Limit Value (IOELV) list in 2nd Indicative Occupational Exposure adobted by Health and Safety Executive.
[4] According Occupational Exposure Limit Values and Measures against Air Contaminants adopted by Swedish Work Environment Authority.
[5] According both Binding Occupational Esposure Limits (BOELVs) and Indicative Occupational Exposure Limits (IOELVs) adopted by Scientific Committee for Occupational Exposure Limits to Chemical Agents (SCOEL).
[6] Selon la liste de Valeurs limites d'exposition professionnelle aux agents chimiques en France adoptés par Institut national de la recherche scientifique.
[7] Secondo il Decreto Legislativo del Governo n.277, 15/08/1991, il Decreto Legislativo n.66 ed il Decreto Ministeriale 26/02/2004.
[8] De acordo com a Norma Portuguesa 1796 adotou pelo Instituto português de qualidade.
The product does NOT contain substances with Biological Limit Values.
Concentration levels DNEL/DMEL:

Name	DNEL/DMEL	Type	Value
2-[2-(2-butoxyethoxy)ethoxy]ethanol, TEGBE, triethylene glycol monobutylether, butoxytriethylene glycol CAS No: 143-22-6 EC No: 205-592-6	DNEL (Workers)	Inhalation, Chronic, Systemic effects	195 (mg/m³)
	DNEL (Consumers)	Inhalation, Chronic, Systemic effects	117 (mg/m³)
	DNEL (Workers)	Dermal, Chronic, Systemic effects	208 (mg/kg)
	DNEL (Consumers)	Dermal, Chronic, Systemic effects	125 (mg/kg)
	DNEL (Consumers)	Oral, Chronic, Systemic effects	12,5 (mg/kg)
2,2' -oxybisethanol, diethylene glycol CAS No: 111-46-6 EC No: 203-872-2	DNEL (Workers)	Inhalation, Chronic, Local effects	60 (mg/m³)
	DNEL (Workers)	Dermal, Chronic, Systemic effects	106 (mg/kg bw/d)
	DNEL (Workers)	Inhalation, Chronic, Systemic effects	60 (mg/m3)
2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether CAS No: 112-34-5 EC No: 203-961-6	DNEL (Workers)	Inhalation, Chronic, Systemic effects	67,5 (mg/m³)
	DNEL (Consumers)	Inhalation, Chronic, Systemic effects	40,5 (mg/m³)
	DNEL (Workers)	Inhalation, Short term, Local effects	101,2 (mg/m3)
	DNEL (Consumers)	Inhalation, Short term, Local effects	60,7 (mg/m3)
	DNEL (Consumers)	Oral, Chronic, Systemic effects	6,25 (mg/kg)
2-(2-methoxyethoxy)ethanol, diethylene glycol monomethyl ether CAS No: 111-77-3 EC No: 203-906-6	DNEL (Workers)	Inhalation, Chronic, Systemic effects	50,1 (mg/m³)

DNEL: Derived No Effect Level, level of exposure to the substance below which adverse effects are not anticipated.

DMEL: Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be considered a tolerable minimum.
Concentration levels PNEC:

Name	Details	Value
2-[2-(2-butoxyethoxy)ethoxy]ethanol, TEGBE, triethylene glycol monobutylether, butoxytriethylene glycol CAS No: 143-22-6 EC No: 205-592-6	fresh water	2 (mg/L)
	Marine water	0,2 (mg/L)
	Intermittent release	8,4 (mg/L)
	STP	200 (mg/L)
	Sediment (Fresh water)	7,7 (mg/kg)
	Sediment (marine water)	0,77 (mg/kg)
	Soil	0,45 (mg/kg)
	Oral	111 (mg/kg)
2,2' -oxybisethanol, diethylene glycol CAS No: 111-46-6 EC No: 203-872-2	Fresh water	10 (mg/L)
	Marine water	1 (mg/L)
	Aqua(Intermittent release)	10 (mg/L)
	STP	199,5 (mg/L)
	Fresh water sediment	20,9 (mg/Kg sediment dw)
	Marine water sediment	2,09 (mg/Kg sediment dw)
	Soil	1,53 (mg/Kg soil dw)
2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether CAS No: 112-34-5 EC No: 203-961-6	freshwater	1,1 (mg/l)
	Marine water	0,11 (mg/L)
	intermittent release	11 (mg/l)
	sediment (freshwater)	4,4 (mg/kg)
	sediment (marine water)	0,44 (mg/kg)
	oral (secondary poisoning):	56 (mg/kg)
	Soil	0,32 (mg/kg)

PNEC: Predicted No Effect Concentration, concentration of the substance below which adverse effects are not expected in the environmental compartment.

8.2 Exposure controls.

Measures of a technical nature:
Provide adequate ventilation, which can be achieved by using good local exhaust-ventilation and a good general exhaust system.

Concentration:	**100 %**
Uses:	**Universal brake fluid.**
Breathing protection:	
If the recommended technical measures are observed, no individual protection equipment is necessary.	
Hand protection:	
If the product is handled correctly, no individual protection equipment is necessary.	
Eye protection:	
If the product is handled correctly, no individual protection equipment is necessary.	
Skin protection:	
PPE:	Work footwear.
Characteristics:	«CE» marking, category II.
CEN standards:	EN ISO 13287, EN 20347
Maintenance:	This product adapts to the first user's foot shape. That is why, as well as for hygienic reasons, it should not be used by other people.
Observations:	Work footwear for professional use includes protection elements aimed at protecting users against any injury resulting from an accident

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES.

9.1 Information on basic physical and chemical properties.
Physical state: Liquid
Colour: Colourless
Odour: Mild

Odour threshold: <-50 ppm
Melting point: Not available
Freezing point: Not available
Boiling point or initial boiling point and boiling range: 136 ºC (Estimation based on the indication of the Regulation (CE) Nº1272/2008.)
Flammability: Not available
Lower explosion limit: Not available
Upper explosion limit: Not available
Flash point: >80 ºC
Auto-ignition temperature: >300 ºC
Decomposition temperature: Not available
pH: 7.5 - 8.5 (100%)
Kinematic viscosity: Not available due to the nature/properties of the product
Solubility: Not available
Hydrosolubility: Soluble
Liposolubility: Not available
Partition coefficient n-octanol/water (log value): <2 , OECD117
Vapour pressure: 22,268 (Estimation based on the indication of the Regulation (CE) Nº1272/2008.)
Absolute density: Not available
Relative density: 1.01 - 1.07 g/ml
Relative vapour density: Not available
Particle characteristics: Not available

9.2 Other information
Other safety characteristics
Viscosity: 5 - 10 cSt @ 20ºC ASTM D445

SECTION 10: STABILITY AND REACTIVITY.

10.1 Reactivity.
The product does not present hazards by their reactivity.

10.2 Chemical stability.
Stable under the recommended handling and storage conditions (see section 7).

10.3 Possibility of hazardous reactions.
The product does not present possibility of hazardous reactions.

10.4 Conditions to avoid.
Avoid any improper handling.

10.5 Incompatible materials.
Keep away from oxidising agents and from highly alkaline or acidic materials in order to prevent exothermic reactions.

10.6 Hazardous decomposition products.
No decomposition if used for the intended uses.

SECTION 11: TOXICOLOGICAL INFORMATION.

IRRITANT MIXTURE. Splashes in the eyes can cause irritation.

11.1 Information on hazard classes as defined in Regulation (EC) Nº 1272/2008.
Repeated or prolonged contact with the product can cause the elimination of oil from the skin, giving rise to non-allergic contact dermatitis and absorption of the product through the skin.

Toxicological information about the substances present in the composition.

Name	Acute toxicity			
	Type	Test	Kind	Value
2-[2-(2-butoxyethoxy)ethoxy]ethanol, TEGBE, triethylene glycol monobutylether, butoxytriethylene glycol	Oral	DL50	Rat	>5000 mg/kg [1]
		[1] (literature value)		
	Dermal	DL50	Rabbit	>2000 mg/kg [1]

		[1] (literature value)
CAS No: 143-22-6 EC No: 205-592-6	Inhalation	
2,2' -oxybisethanol, diethylene glycol	Oral	LD50 rat (male) 19600 mg/kg bw [1] [1] Lenk W, Löhr D, Sonnenbichler J. Pharmacokinetics and biotransformation of diethylene glycol and ethylene glycol in the rat. 1989. Xenobiotica 19: 961-979
	Dermal	LD50 Rabbit 13330 mg/kg
CAS No: 111-46-6 EC No: 203-872-2	Inhalation	LC50 Rat >4.6 mg/L (4h) [1] [1] Experimental valor
2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether	Oral	DL50 Rat 3384 mg/kg bw [1] ETA >5000 mg/Kg bw [1] OECD 401
	Dermal	DL50 Rabbit 2764 mg/kg [1] ETA >2000 mg/kg bw [1] (OECD Guideline 402)
CAS No: 112-34-5 EC No: 203-961-6	Inhalation	CL50 Rat >6000 mg/m3 (4h) [1] ETA >20000 mg/m3 [1] OECD 403
2-(2-methoxyethoxy)ethanol, diethylene glycol monomethyl ether	Oral	LD50 Rat 4090 mg/kg bw [1] [1] National Technical Information Service. Vol. OTS0520737
	Dermal	LD50 Rabbit 2560 mg/kg bw [1] [1] National Technical Information Service. Vol. OTS0516797
CAS No: 111-77-3 EC No: 203-906-6	Inhalation	

a) acute toxicity;
Not conclusive data for classification.

Acute Toxicity Estimate (ATE):
Mixtures:
ATE (Oral) = 5.000 mg/kg

b) skin corrosion/irritation;
Not conclusive data for classification.

c) serious eye damage/irritation;
Product classified:
Eye irritation, Category 2: Causes serious eye irritation.

d) respiratory or skin sensitisation;
Not conclusive data for classification.

e) germ cell mutagenicity;
Not conclusive data for classification.

f) carcinogenicity;
Not conclusive data for classification.

g) reproductive toxicity;
Based on available data, the classification criteria are not met.

h) STOT-single exposure;
Not conclusive data for classification.

i) STOT-repeated exposure;

Not conclusive data for classification.

j) aspiration hazard;
Not conclusive data for classification.

11.2 Information on other hazards.
Endocrine disrupting properties
This product does not contain components with endocrine-disrupting properties with effects on human health.

Other information
There is no information available on other adverse health effects.

SECTION 12: ECOLOGICAL INFORMATION.

12.1 Toxicity.

Name	Ecotoxicity			
	Type	Test	Kind	Value
2-[2-(2-butoxyethoxy)ethoxy]ethanol, TEGBE, triethylene glycol monobutylether, butoxytriethylene glycol CAS No: 143-22-6 EC No: 205-592-6	Fish	CL50	L.idus	2200 mg/L (96h) [1] [1] DIN 38412 Part 15, estatic
	Aquatic invertebrates	CE50 NOEC	D.magna D.magna	>500 mg/L (48h) [1] 100 mg/L (21d) [2] [1] Method: OECD Test Guideline 202 [2] OECD Test Guideline 211(literature value)
	Aquatic plants	EC50 NOEC	P.subcapitata P.subcapitata	>100 mg/L (72h) [1] 100 mg/L (72h) [2] [1] OECD Test Guideline 201. (literature value) [2] OECD Test Guideline 201. (literature value)
2,2' -oxybisethanol, diethylene glycol CAS No: 111-46-6 EC No: 203-872-2	Fish	LC50	Fish	75200 mg/l (96 h) [1] [1] Geiger, D.L., L.T. Brooke, and D.J. Call 1990. Acute Toxicities of Organic Chemicals to Fathead Minnows (Pimephales promelas), Volume 5. Ctr.for Lake Superior Environ.Stud., Univ.of Wisconsin-Superior, Superior, WI :332 p
	Aquatic invertebrates	EC50	Daphnia magna	> 10000 mg/L (24 h) [1] [1] publication, 1982. Z. Wasser Abwasser Forsch 15(1): 1-6
	Aquatic plants			
2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether CAS No: 112-34-5 EC No: 203-961-6	Fish	LC50	Lepomis macrochirus	1300 mg/l (96 h) [1] [1] OECD 203. Dawson, G.W., A.L. Jennings, D. Drozdowski, and E. Rider 1977. The Acute Toxicity of 47 Industrial Chemicals to Fresh and Saltwater Fishes. J.Hazard.Mater. 1(4):303-318 (OECDG Data File)
	Aquatic invertebrates	EC50	Daphnia magna	> 100 mg/L (48 h) [1] [1] Study report according to EU Method C.2 (Acute Toxicity for Daphnia)
	Aquatic plants	EC50	Desmodesmus subspicatus	> 100 mg/L (96 h) [1] [1] Study report according to OECD Guideline 201 (Alga, Growth Inhibition Test)
2-(2-methoxyethoxy)ethanol, diethylene glycol	Fish	LC50	Fish	7500 mg/l (96 h) [1]

monomethyl ether		[1] Dawson, G.W., A.L. Jennings, D. Drozdowski, and E. Rider 1977. The Acute Toxicity of 47 Industrial Chemicals to Fresh and Saltwater Fishes. J.Hazard.Mater. 1(4):303-318 (OECDG Data File)
	Aquatic invertebrates	
CAS No: 111-77-3 EC No: 203-906-6	Aquatic plants	

12.2 Persistence and degradability.
No information is available regarding the biodegradability of the substances present.

Information on degradability:

Name	Degradability		
	Type	Period	Value
2-[2-(2-butoxyethoxy)ethoxy]ethanol, TEGBE, triethylene glycol monobutylether, butoxytriethylene glycol CAS No: 143-22-6 EC No: 205-592-6	BOD	28 d OCDE 301D. CEE 92/69, C.4-E	85 %

No information is available about persistence and degradability of the product.

12.3 Bioaccumulative potential.
Information about the bioaccumulation of the substances present.

Name	Bioaccumulation			
	Log Pow	BCF	NOECs	Level
2,2' -oxybisethanol, diethylene glycol CAS No: 111-46-6 EC No: 203-872-2	-1,47	100	-	Very low
2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether CAS No: 112-34-5 EC No: 203-961-6	0,56	3,2	-	Very low

12.4 Mobility in soil.
No information is available about the mobility in soil.
The product must not be allowed to go into sewers or waterways.
Prevent penetration into the ground.

12.5 Results of PBT and vPvB assessment.
No information is available about the results of PBT and vPvB assessment of the product.

12.6 Endocrine disrupting properties.
This product doesn't contain components with environmental endocrine disrupting properties.

12.7 Other adverse effects.
The product is not affected by the Regulation (EC) No 1005/2009 of the European Parliament and of the Council of 16 September 2009 on substances that deplete the ozone layer.
No information is available about other adverse effects for the environment.

SECTION 13: DISPOSAL CONSIDERATIONS.

13.1 Waste treatment methods.
Do not dump into sewers or waterways. Waste and empty containers must be handled and eliminated according to current, local/national legislation.
Follow the provisions of Directive 2008/98/EC regarding waste management.

Waste classification according to the European Waste Catalogue:

16 WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 01 end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08)
16 01 13 brake fluids
Waste classified as hazardous.

SECTION 14: TRANSPORT INFORMATION.

Transportation is not dangerous. In case of road accident causing the product's spillage, proceed in accordance with point 6.

14.1 UN number or ID number.
Transportation is not dangerous.

14.2 UN proper shipping name.
Description:
ADR/RID: Not classified as hazardous for transport.
IMDG: Not classified as hazardous for transport.
ICAO/IATA: Not classified as hazardous for transport.

14.3 Transport hazard class(es).
Transportation is not dangerous.

14.4 Packing group.
Transportation is not dangerous.

14.5 Environmental hazards.
Transportation is not dangerous.
Transport by ship, FEm – Emergency sheets (F – Fire, S - Spills): Not applicable.

14.6 Special precautions for user.
Transportation is not dangerous.

14.7 Maritime transport in bulk according to IMO instruments.
Not classified as hazardous for transport.

SECTION 15: REGULATORY INFORMATION.

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

Volatile organic compound (VOC)
VOC content (p/p): 15 %
VOC content: 151,5 g/l

The product is not affected by Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products.
The product is not affected by the procedure established Regulation (EU) No 649/2012, concerning the export and import of dangerous chemicals.
Restrictions on the manufacturing, placing on the market and use of certain dangerous substances, mixtures and articles:

Designation of the substance, of the group of substances or of the mixture	Conditions of restriction
3. Liquid substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: (a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F; (b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic	1. Shall not be used in: - ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, - tricks and jokes, - games for one or more participants, or any article intended to be used as such, even with ornamental aspects, 2. Articles not complying with paragraph 1 shall not be placed on the market. 3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they: - can be used as fuel in decorative oil lamps for supply to the general public, and,

effects, 3.9 and 3.10; (c) hazard class 4.1; (d) hazard class 5.1.	- present an aspiration hazard and are labelled with H304, 4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN). 5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met: (a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: 'Keep lamps filled with this liquid out of the reach of children'; and, by 1 December 2010, 'Just a sip of lamp oil - or even sucking the wick of lamps - may lead to life-threatening lung damage'; (b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: 'Just a sip of grill lighter may lead to life threatening lung damage'; (c) lamp oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010. .
54. 2-(2-methoxyethoxy)ethanol (DEGME) CAS No 111-77-3 EC No 203-906-6	Shall not be placed on the market after 27 June 2010, for supply to the general public, as a constituent of paints, paint strippers, cleaning agents, self-shining emulsions or floor sealants in concentrations equal to or greater than 0,1 % by weight.

Kind of pollutant to water (Germany): WGK 1: Slightly hazardous to water. (Autoclassified according to the AwSV Regulations)

15.2 Chemical safety assessment.
No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16: OTHER INFORMATION.

Complete text of the H phrases that appear in section 3:

H302	Harmful if swallowed.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H360D	May damage the unborn child.

Classification codes:
Acute Tox. 4 : Acute toxicity (Oral), Category 4
Eye Dam. 1 : Serious eye damage, Category 1
Eye Irrit. 2 : Eye irritation, Category 2
Repr. 1B : Reproductive toxicant, Category 1B

Changes regarding to the previous version:
- Changes in the information of the supplier (SECTION 1.3).
- Change in the emergency number (SECTION 1.4).
- Modification of specific hazards (SECTION 2.3).
- Changes in the composition of the product (SECTION 3.2).
- Modification in the firefighting measures (SECTION 5.2).
- Modifications in the accidental release measures (SECTION 6.1).
- Modification of exposure data (SECTION 8.1).
- Modification in the values of the physical and chemical properties (SECTION 9).
- Modification of toxicity values (SECTION 11.1).
- Change in the hazard classification (SECTION 11.1).
- Modification of ecological information values (SECTION 12.1).
- Addition of ecological information values (SECTION 12.2).
- Modification of ecological information values (SECTION 12.3).
- Modification of the classification ADR/IMDG/ICAO/IATA/RID (SECTION 14).
- National legislative changes (SECTION 15.1).
- Elimination of abbreviations and acronyms (SECTION 16).
- Addition of abbreviations and acronyms (SECTION 16).

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

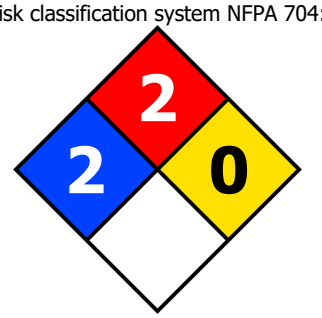
Physical hazards	On basis of test data
Health hazards	Calculation method
Environmental hazards	Calculation method

It is advisable to carry out basic training with regard to health and safety at work in order to handle this product correctly.

Information on the TSCA Inventory (Toxic Substances Control Act) USA:

CAS No	Name	State
143-22-6	2-[2-(2-butoxyethoxy)ethoxy]ethanol, TEGBE, triethylene glycol monobutylether, butoxytriethylene glycol	Registered
111-46-6	2,2' -oxybisethanol, diethylene glycol	Registered
112-34-5	2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether	Registered
111-77-3	2-(2-methoxyethoxy)ethanol, diethylene glycol monomethyl ether	Registered

Risk classification system NFPA 704:



Health hazard: 2 (Hazardous)

Flammability: 2 (Below 200°F)

Reactivity: 0 (Stable)

Abbreviations and acronyms used:

AwSV:	Facility Regulations for handling substances that are hazardous for the water.
BCF:	Bioconcentration factor.
CEN:	European Committee for Standardization.
BOD:	Biochemical Oxygen Demand.
DMEL:	Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be considered a tolerable minimum.
DNEL:	Derived No Effect Level, level of exposure to the substance below which adverse effects are not anticipated.
EC50:	Half maximal effective concentration.
PPE:	Personal protection equipment.
LC50:	Lethal concentration, 50%.
LD50:	Lethal dose, 50%.
NOEC:	No observed effect concentration.
PNEC:	Predicted No Effect Concentration, concentration of the substance below which adverse effects are not expected in the environmental compartment.
WGK:	Water hazard classes.

Key literature references and sources for data:
http://eur-lex.europa.eu/homepage.html
http://echa.europa.eu/
Regulation (EU) 2020/878.
Regulation (EC) No 1907/2006.
Regulation (EC) No 1272/2008.

The information given in this Safety Data Sheet has been drafted in accordance with COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemical substances and mixtures (REACH).

The information in this Safety Data Sheet on the Preparation is based on current knowledge and on current EC and national laws, as far as the working conditions of the users is beyond our knowledge and control. The product must not be used for purposes other than those that are specified without first having written instructions on how to handle. It is always the responsibility of the user to take the appropriate measures in order to comply with the requirements established by current legislation. The information contained in this Safety Sheet only states a description of the safety requirements for the preparation, and it must not be considered as a guarantee of its properties.