Eni Antifreeze Bike S

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878
Revision date: 6/4/2024 Supersedes: 10/18/2023 Version: 1.1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	:	Mixture
Trade name	:	Eni Antifreeze Bike S
UFI	:	00CV-HY9Q-D00R-073Q
Product code	:	1619
Type of product	:	Anti-Freeze and De-icing products
Formula	:	1810-2023
Product group	:	Trade product

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

1.2.1. Relevant identified uses

Main use category	:	Industrial use,Professional use,Consumer use
Industrial/Professional use spec	:	Wide dispersive use Used in closed systems
Use of the substance/mixture	:	Antifreeze fluids ---- Do not use the product for any purposes that have not been advised by the manufacturer.
Function or use category	:	Anti-freezing agents

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Enilive S.p.A, Viale Giorgio Ribotta 51, 00144 Rome, ITALY, Tel. +39 06 59821

Competent person responsible for the safety data sheet (Reg. EC nr. 1907/2006): SDS.Enilive@enilive.com

Distributed by: Enilive Schmiertechnik GmbH, Paradiesstraße 14, 97080 Würzburg, GERMANY

Department responsible for information: Application Engineering & Product Management (AEPM), Tel. +49 (0)931-900 98-0

e-mail: technik.wuerzburg@enilive.com

1.4. Emergency telephone number

Emergency number	:	CNIT +39 0382 24444 (24h) (IT + EN) Poison Center

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [EU-GHS / CLP]

Acute toxicity (oral), Category 4	H302
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2	H319
Specific target organ toxicity – Repeated exposure, Category 2	H373

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Harmful if swallowed. May cause damage to organs (kidneys) through prolonged or repeated exposure (oral). For specific information about the toxicological/ecotoxicological properties and classification of this product, see Sect. 11 and/or Sect. 12.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :

GHS07 GHS08

CLP Signal word : Warning

Contains : ethylene glycol

Hazard statements (CLP) : H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H373 - May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).

Precautionary statements (CLP) : P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P264 - Wash hands thoroughly after handling.
P280 - Wear protective clothing, eye protection, face protection, protective gloves.
P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER, a doctor.
P501 - Dispose of contents and container to according to national or local regulations.

2.3. Other hazards (not relevant for classification)

Other hazards not contributing to the classification : Any substance, in case of accidents involving pressurized circuits and the like, may be accidentally injected under the skin, even without external damage. In such a case, the victim should be brought to an hospital as soon as possible, to get specialized medical treatment. Do not wait for symptoms to develop.

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	ethylene glycol (107-21-1), 2-ethylhexanoic acid and its salts, with the exception of those specified elsewhere in this Annex (149-57-5), Methyl-1H-benzotriazole (29385-43-1), Sodium hydroxide (1310-73-2)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	ethylene glycol (107-21-1), 2-ethylhexanoic acid and its salts, with the exception of those specified elsewhere in this Annex (149-57-5), Methyl-1H-benzotriazole (29385-43-1), Sodium hydroxide (1310-73-2)

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are 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 at a concentration equal to or greater than 0,1 %

Component	
Substance(s) 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	ethylene glycol (107-21-1), Sodium hydroxide (1310-73-2), 2-ethylhexanoic acid and its salts, with the exception of those specified elsewhere in this Annex (149-57-5), Methyl-1H-benzotriazole (29385-43-1)

Other information : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are 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 at a concentration equal to or greater than 0,1 %.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [EU-GHS / CLP]
ethanediol; ethylene glycol substance with national workplace exposure limit(s) (AT, BE, BG, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GI, GR, HR, HU, IE, IT, LT, LU, LV, MT, NL, PL, PT, RO, SE, SI, SK); substance with a Community workplace exposure limit	CAS-No.: 107-21-1 EC-No.: 203-473-3 EC Index-No.: 603-027-00-1 REACH-no: 01-2119456816-28	≥ 50 < 54	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) STOT RE 2, H373
sodium hydroxide; caustic soda substance with national workplace exposure limit(s) (AT, BE, DK, ES, FI, FR, GB, HU, IE, LV, PL, SE)	CAS-No.: 1310-73-2 EC-No.: 215-185-5 EC Index-No.: 011-002-00-6 REACH-no: 01-2119457892-27	0.9 – 1	Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318
2-ethylhexanoic acid and its salts, with the exception of those specified elsewhere in this Annex	CAS-No.: 149-57-5 EC-No.: 205-743-6 EC Index-No.: 607-230-00-6 REACH-no: 01-2119488942-23	≥ 0.15 < 0.2	Repr. 1B, H360D
Methyl-1H-benzotriazole	CAS-No.: 29385-43-1 EC-No.: 249-596-6 REACH-no: 01-2119979081-35	0.1 – 0.15	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Repr. 2, H361 Aquatic Chronic 2, H411

Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
sodium hydroxide; caustic soda	CAS-No.: 1310-73-2 EC-No.: 215-185-5 EC Index-No.: 011-002-00-6 REACH-no: 01-2119457892-27	(0.5 ≤ C < 2) Skin Irrit. 2, H315 (0.5 ≤ C < 2) Eye Irrit. 2, H319 (2 ≤ C < 5) Skin Corr. 1B, H314 (5 ≤ C ≤ 100) Skin Corr. 1A, H314

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : In case of doubt or persistent symptoms, consult always a physician.

First-aid measures after inhalation : In case of disturbances owing to inhalation of vapours or mists, remove the victim from exposure; keep at rest; if necessary, seek medical attention. If casualty is unconscious and not breathing: ensure that there is no obstruction to breathing and give artificial respiration by trained personnel. Place in the recovery position.

First-aid measures after skin contact : Take off immediately all contaminated clothing. Wash skin with plenty of water. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : Remove contact lenses, if present and easy to do so. Rinse eyes thoroughly for at least 15 minutes. Keep eyelids well apart. If irritation, blurred vision or swelling occurs and persists, obtain medical advice from a specialist.

First-aid measures after ingestion : Rinse mouth thoroughly with water. Do not induce vomiting. If the person is fully conscious, make him/her drink plenty of water. Never give an unconscious person anything to drink. In case of spontaneous vomiting, keep head low, to avoid the risk of aspiration into the lungs. Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms / injuries (general indications) : There are potential chronic health effects to consider.

Symptoms/effects after inhalation : None under normal conditions at ambient temperatures.

Symptoms/effects after skin contact : Prolonged or repeated skin contact may cause a slight transient irritation.

Symptoms/effects after eye contact : None to be reported.

Symptoms/effects after ingestion : Harmful if swallowed. Ingestion of significant quantities (see sect. 11) may cause kidney damages, coma and death. The effects may be delayed.

Symptoms/effects upon intravenous administration : No information available.

Chronic symptoms : May cause damage to kidneys through prolonged or repeated exposure if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Obtain medical attention if casualty has an altered state of consciousness or if symptoms do not resolve.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Dry chemical, CO2, or water spray or regular foam. Other extinguishing gases (according to regulations).

Unsuitable extinguishing media : None specific.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Not flammable. Product with a very low risk of fire. It can create flammable mixtures or burn only when the water content has evaporated.

Explosion hazard : Heat may build pressure in tank and containers, rupturing closed vessels, spreading fire and increasing risk of burns and injuries.

Hazardous decomposition products in case of fire : Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases. Oxygenated compounds (aldehydes, etc.).

5.3. Advice for firefighters

Firefighting instructions : Shut off source of product, if possible. If possible, move containers and drums away from the danger area, if safe to do so. Spilled product which is not burning should be covered with sand or foam. Use water sprays to cool containers and surfaces exposed to the flames. If the fire cannot be controlled, evacuate area.

Special protective equipment for firefighters : Wear recommended personal protective equipment. In case of a large fire or in confined or poorly ventilated spaces, wear full fire resistant protective clothing and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. EN 443. EN 469. EN 659.

Other information : In case of fire, do not discharge residual product, waste materials and runoff water: collect separately and use a proper treatment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop or contain leak at the source, if safe to do so. Eliminate all ignition sources if safe to do so (e.g. electricity, sparks, fires, flares). Avoid direct contact with released material.

6.1.1. For non-emergency personnel

Protective equipment : See Section 8.

Emergency procedures	:	Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency.

6.1.2. For emergency responders

Protective equipment	:	Small spillages: normal antistatic working clothes are usually adequate. Large spillages: full body suit of chemically resistant and antistatic material. if necessary heat resistant and insulated. Work gloves (preferably gauntlets) providing adequate chemical resistance. Gloves made of PVA are not water-resistant, and are not suitable for emergency use. Work helmet. Antistatic non-skid safety shoes or boots. Goggles and /or face shield, if splashes or contact with eyes is possible or anticipated. Respiratory protection: a half or full-face respirator with filter(s) for organic vapours (AX), or a Self-contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.
Emergency procedures	:	If required, notify relevant authorities according to all applicable regulations.

6.2. Environmental precautions

Prevent product from entering sewers, rivers or other bodies of water, or underground spaces (tunnels, cellars, etc.). In case of contamination of environment compartments (soil, subsoil, surface or underground waters), remove contaminated soil when possible, and in any case treat all involved compartments in accordance with local regulations.

6.3. Methods and material for containment and cleaning up

For containment	:	Contain spilled liquid with sand, earth or other suitable absorbents. Recover free liquid in suitable containers. Clean contaminated area. Dispose of according to local regulations. If in water: This product is soluble in water, and usually no special measures are feasible. If possible, collect spilled product with mechanical means. Notify official Authorities when required. Dispose of in accordance with relevant local regulations. Do not use solvents or dispersants, unless specifically advised by an expert, and, if required, approved by local authorities.
Methods for cleaning up	:	Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Transfer recovered product and other materials to suitable tanks or containers and store/dispose according to relevant regulations. This material and its container must be disposed of in a safe way, and according to local legislation.
Other information	:	Local regulations may also prescribe or limit actions to be taken. Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air/water temperature, wave/current direction and speed) may significantly influence the choice of appropriate actions. For this reason, local experts should be consulted when necessary.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Provide good ventilation in process area to prevent formation of vapour. Do not breathe fume/ mist/ vapours. Use personal protective equipment as required. Store in dry, well-ventilated area.
Hygiene measures	:	Avoid contact with skin. Do not breathe fume/ mist/ vapours. Do not ingest. Do not smoke. Do not eat and do not drink during use. Do not clean hands with dirty or oil-soaked rags. Do not re-use clothes, if they are still contaminated. Keep away from food and beverages. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Contaminated work clothing should not be allowed out of the workplace. Separate working clothes from town clothes. Launder separately.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	:	Store in dry, well-ventilated area. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. If the product is supplied in containers: Keep only in the original container or in a suitable container for this kind of product. Keep containers tightly closed and properly labelled.
Incompatible products	:	Strong oxidizing agents. Strong acids. Alkali metals.
Incompatible materials	:	None in normal conditions.
Storage area	:	Storage area layout, tank design, equipment and operating procedures must comply with the relevant European, national or local legislation. Storage installations/areas should be designed with adequate bunds in case of leaks or spills. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations.
Packages and containers:	:	Store away from direct sunlight or other heat sources. Do not re-use empty containers.
Packaging materials	:	Keep only in original container. Some synthetic materials may be unsuitable for containers or container linings depending on the material specification and intended use. Compatibility should be checked with the manufacturer, according to the specific use conditions.

Germany

Storage class (LGK, TRGS 510)	:	LGK 12 - Non-combustible liquids

Switzerland

Storage class (LK)	:	LK 6.1 - Toxic materials

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

ethanediol; ethylene glycol (107-21-1)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Ethylene glycol
IOEL TWA	52 mg/m³ Vapours
IOELV TWA (ppm)	20 ppm
IOELV STEL (mg/m³)	104 mg/m³ Vapours
IOELV STEL (ppm)	40 ppm
Notes	Skin
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
Austria - Occupational Exposure Limits	
Local name	Ethylenglykol (Ethandiol; Glykol)
MAK (OEL TWA)	26 mg/m³ Vapours
MAK [ppm]	10 ppm
MAK (OEL STEL)	52 mg/m³ Vapours
MAK Short time value [ppm]	20 ppm
Regulatory reference	BGBl. II Nr. 156/2021
Belgium - Occupational Exposure Limits	
Local name	Ethylèneglycol (en aérosol) # Ethyleenglycol
OEL TWA	52 mg/m³ (Inhalable aerosol)

ethanediol; ethylene glycol (107-21-1)	
Short time value [mg/m³]	104 mg/m³ (Inhalable aerosol)
Remark (BE)	D: la mention “D” signifie que la résorption de l’agent, via la peau, les muqueuses ou les yeux, constitue une partie importante de l’exposition totale. Cette résorption peut se faire tant par contact direct que par présence de l’agent dans l’air, M: la mention “M” indique que lors d’une exposition supérieure à la valeur limite, des irritations apparaissent ou un danger d’intoxication aiguë existe. Le procédé de travail doit être conçu de telle façon que l’exposition ne dépasse jamais la valeur limite. Lors des mesurages, la période d’échantillonnage doit être aussi courte que possible afin de pouvoir effectuer des mesurages fiables. Le résultat des mesurages est calculé en fonction de la période d’échantillonnage. # D: de vermelding “D” betekent dat de opname van het agens via de huid, de slijmvliezen of de ogen een belangrijk deel van de totale blootstelling vormt. Deze opname kan het gevolg zijn van zowel direct contact als zijn aanwezigheid in de lucht, M: de vermelding “M” duidt aan dat bij de blootstelling boven de grenswaarde irritatie optreedt of er gevaar bestaat voor acute vergiftiging. Het werkprocédé moet zo zijn ontworpen dat de blootstelling de grenswaarde nooit overschrijdt. Bij een controle geldt dat de bemonsterde periode zo kort mogelijk moet zijn om een betrouwbare meting te kunnen verrichten. Het meetresultaat wordt dan gerelateerd aan de beschouwde periode.
Regulatory reference	Koninklijk besluit/Arrêté royal 16/11/2023
Bulgaria - Occupational Exposure Limits	
Local name	Етиленгликол
OEL TWA	52 mg/m³
OEL TWA (ppm)	20 ppm
OEL STEL (mg/m³)	104 mg/m³
OEL STEL (ppm)	40 ppm
Remark	Кожа (възможна е значителна резорбция чрез кожата); • (Химични агенти, за които са определени гранични стойности във въздуха на работната среда за Европейската общност)
Regulatory reference	Наредба № 13 от 30.12.2003 г. за защита на работещите от рискове, свързани с експозиция на химични агенти при работа (изм. и доп. ДВ. бр. 47 от 2021 г., в сила от 04.06.2021 г.)
Croatia - Occupational Exposure Limits	
Local name	Etandiol; etilen-glikol
GVI (OEL TWA)	52 mg/m³
	20 ppm
KGVI (OEL STEL)	104 mg/m³
	40 ppm
Remark	Direktiva: 2000/39/EZ. Napomena: Koža (razvrstana kao tvar koja nadražuje kožu (H315))
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 148/2023)
Cyprus - Occupational Exposure Limits	
Local name	Αιθυλενογλυκόλη
OEL TWA (mg/m³)	52 mg/m³
OEL TWA (ppm)	20 ppm
OEL STEL (mg/m³)	104 mg/m³
OEL STEL (ppm)	40 ppm
Remark	δέρμα

ethanediol; ethylene glycol (107-21-1)	
Regulatory reference	Κανονισμοί του 2007 (Κ.Δ.Π. 295/2007)
Czech Republic - Occupational Exposure Limits	
Local name	Ethylenglykol (Ethan-1,2-diol)
Expoziční limity (PEL) (mg/m³)	50 mg/m³
Expoziční limity (PEL) (ppm)	19.38 ppm
Expoziční limity (NPK-P) (mg/m³)	100 mg/m³
Expoziční limity (NPK-P) (ppm)	38.77 ppm
Remark	D - při expozici se významně uplatňuje pronikání faktoru kůží.
Regulatory reference	Nařízení vlády č. 361/2007 Sb. (Předpis 330/2023 Sb.)
Denmark - Occupational Exposure Limits	
Local name	Ethylenglycol (1,2-Ethandiol; Glycol)
OEL TWA	26 mg/m³ (Inhalable aerosol)
	10 ppm
OEL STEL	52 mg/m³ (Inhalable aerosol)
Grænseværdi (kortvarig) (ppm)	20 ppm
Remark	E (betyder, at stoffet har en EF-grænseværdi); H (betyder, at stoffet kan optages gennem huden)
Regulatory reference	BEK nr 291 af 19/03/2024
Estonia - Occupational Exposure Limits	
Local name	1,2-etaandiool (etüleenglükool)
OEL TWA (mg/m³)	52 mg/m³
OEL TWA (ppm)	20 ppm
OEL STEL (mg/m³)	104 mg/m³
OEL STEL (ppm)	40 ppm
Remark	A (Naha kaudu kergesti imenduv aine), 18 (Piirnorm kehtib auru ja aerosooli summaarse sisalduse kohta)
Regulatory reference	Vabariigi Valitsuse 20. märtsi 2001. a määruse nr 105 (RT I, 21.12.2022, 3)
Finland - Occupational Exposure Limits	
Local name	1,2-Etaanidioli
HTP (OEL TWA)	50 mg/m³
	20 ppm
HTP (OEL STEL)	100 mg/m³
HTP-arvo (15 min) (ppm)	40 ppm
Remark	Iho
Regulatory reference	HTP-ARVOT 2020 (Sosiaali- ja terveysministeriö)
France - Occupational Exposure Limits	
Local name	Ethylèneglycol (vapeur)
VME (OEL TWA)	52 mg/m³ Vapours
VME [ppm]	20 ppm
VLE [mg/m³]	104 mg/m³ Vapours

ethanediol; ethylene glycol (107-21-1)	
VLE [ppm]	40 ppm
Note (FR)	Valeurs règlementaires indicatives. Risque de pénétration percutanée
Regulatory reference	Arrêté du 30 juin 2004 modifié (réf.: INRS ED 6443, 2022; Outil65)
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	Ethandiol
AGW (OEL TWA)	26 mg/m³ (Inhalable aerosol) (15 min)
	10 ppm
Limitation of exposure peaks (mg/m³)	52 mg/m³ (Inhalable aerosol) (15 min)
Limitation of exposure peaks (ppm)	20 ppm
Peak exposure limitation factor	2(I)
Remark (TRGS 900)	DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); EU - Europäische Union (Von der EU wurde ein Luftgrenzwert festgelegt: Abweichungen bei Wert und Spitzenbegrenzung sind möglich); H - hautresorptiv; Y - Ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden; 11 - Summe aus Dampf und Aerosolen
Regulatory reference	TRGS900
Gibraltar - Occupational Exposure Limits	
Local name	Ethylene glycol
OEL TWA (mg/m³)	52 mg/m³
OEL TWA (ppm)	20 ppm
OEL STEL (mg/m³)	104 mg/m³
OEL STEL (ppm)	40 ppm
Remark	Skin
Regulatory reference	Factories (Control of Chemical Agents at Work) Regulations 2003 (LN. 2018/181)
Greece - Occupational Exposure Limits	
Local name	Αιθυλενογλυκόλη (στμοί)
OEL TWA (mg/m³)	125 mg/m³
OEL TWA (ppm)	50 ppm
OEL STEL (mg/m³)	125 mg/m³
OEL STEL (ppm)	50 ppm
Regulatory reference	Π.Δ. 90/1999 - Προστασία της υγείας των εργαζομένων που εκτίθενται σε ορισμένους χημικούς παράγοντες κατά τη διάρκεια της εργασίας τους
Hungary - Occupational Exposure Limits	
Local name	ETILÉNGLIKOL
AK (OEL TWA)	52 mg/m³
CK-érték	104 mg/m³
Remark	b (Bőrön át is felszívódik), i (ingerlő anyag, amely izgatja a bőrt, nyálkahártyát, szemet vagy mindhármat); EU1 (2000/39/EK irányelvben közölt érték); N (Irritáló anyagok, egyszerű fojtógázok, csekély egészségkárosító hatással bíró anyagok)
Regulatory reference	5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről

ethanediol; ethylene glycol (107-21-1)	
Ireland - Occupational Exposure Limits	
Local name	Ethane-1,2-diol [Ethylene glycol]
OEL TWA	52 mg/m³ Vapours
	20 ppm
OEL (15 min ref) (mg/m3)	104 mg/m³ Vapours
OEL (15 min ref) (ppm)	40 ppm
Remark	IOELV (Indicative Occupational Exposure Limit Values), Skin (Substances which have the capacity to penetrate intact skin when they come in contact with it and be absorbed into the body. A substantial contribution to the total body burden via dermal exposure is possible)
Regulatory reference	Chemical Agents Code of Practice 2024
Italy - Occupational Exposure Limits	
Local name	Etilen glicol
OEL TWA (mg/m³)	52 mg/m³ Skin
OEL TWA (ppm)	20 ppm Skin
OEL STEL (mg/m³)	104 mg/m³ Skin
OEL STEL (ppm)	40 ppm Skin
Remark	Cute
Regulatory reference	Allegato XXXVIII del D.Lgs. 9 aprile 2008, n. 81 e s.m.i.
Latvia - Occupational Exposure Limits	
Local name	Etilēnglikols, (1,2-etāndiols)
OEL TWA	52 mg/m³
OEL TWA (ppm)	20 ppm
OEL STEL	104 mg/m³
	40 ppm
Remark	Āda
Regulatory reference	Ministru kabineta 2007. gada 15. maija noteikumiem Nr. 325
Lithuania - Occupational Exposure Limits	
Local name	Etilenglikolis (1,2-etandiolis, glikolis)
IPRV (mg/m³)	25 mg/m³
IPRV (ppm)	10 ppm
TPRV (mg/m³)	50 mg/m³
TPRV (ppm)	20 ppm
Remark	O (medžiaga į organizmą gali prasiskverbti pro nepažeistą odą); Šis RD taikomas bendrai garų ir aerozolio koncentracijai.
Regulatory reference	LIETUVOS HIGIENOS NORMA HN 23:2011 (Nr. V-695/A1-272, 2018-06-12)
Luxembourg - Occupational Exposure Limits	
Local name	Éthylène-glycol
OEL TWA (mg/m³)	52 mg/m³
OEL TWA (ppm)	20 ppm

ethanediol; ethylene glycol (107-21-1)	
OEL STEL (mg/m³)	104 mg/m³
OEL STEL (ppm)	40 ppm
Remark	Peau
Regulatory reference	Mémorial A Nº 226 de 2021 concernant la protection de la sécurité et de la santé des salariés contre les risques liés à des agents chimiques sur le lieu de travail
Malta - Occupational Exposure Limits	
Local name	Ethylene glycol
OEL TWA (mg/m³)	52 mg/m³
OEL TWA (ppm)	20 ppm
OEL STEL (mg/m³)	104 mg/m³
OEL STEL (ppm)	40 ppm
Remark	Skin # Ġilda
Regulatory reference	S.L.424.24 - Chemical Agents at Work Regulations (L.N.356 of 2021)
Netherlands - Occupational Exposure Limits	
Local name	Ethaan-1,2-diol
MAC TGG 8h (mg/m³)	52 mg/m³ Vapours
MAC TGG 8h (ppm)	20 ppm (damp)
MAC TGG 15 min (mg/m³)	104 mg/m³ Vapours
MAC TGG 15 min (ppm)	40 ppm (damp)
Remark (MAC)	H (Huidopname) Stoffen die relatief gemakkelijk door de huid kunnen worden opgenomen, hetgeen een substantiële bijdrage kan betekenen aan de totale inwendige blootstelling, hebben in de lijst een H-aanduiding. Bij deze stoffen moeten naast maatregelen tegen inademing ook adequate maatregelen ter voorkoming van huidcontact worden genomen.
Regulatory reference	Arbeidsomstandighedenregeling 2024
Poland - Occupational Exposure Limits	
Local name	Glikol etylenowy
NDS (OEL TWA)	15 mg/m³ (Inhalable aerosol)
NDSCh (OEL STEL)	50 mg/m³
Remark	Skóra (Oznakowanie substancji notacją „skóra” oznacza, że wchłanianie substancji przez skórę może być tak samo istotne jak przy narażeniu drogą oddechową).
Regulatory reference	Dz. U. 2018 poz. 1286 wraz z późn. zm.
Portugal - Occupational Exposure Limits	
Local name	Etilenoglicol
OEL - Ceilings (ppm)	100 ppm H (Apenas aerossol)
Remark	A4 (Agente não classificável como carcinogénico no Homem)
Regulatory reference	Norma Portuguesa NP 1796:2014
Romania - Occupational Exposure Limits	
Local name	Etilenglicol/Etandiol
OEL TWA	52 mg/m³
OEL TWA (ppm)	20 ppm
OEL STEL (mg/m³)	104 mg/m³

ethanediol; ethylene glycol (107-21-1)	
OEL STEL (ppm)	40 ppm
Remark	P - posibilitatea unei penetrări cutanate importante
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 53/2021)
Slovakia - Occupational Exposure Limits	
Local name	Etylénglykol (etán-1,2-diol)
NPHV (priemerná) (mg/m³)	52 mg/m³
NPHV (OEL TWA)	20 ppm
NPHV (OEL STEL)	104 mg/m³
	40 ppm
Remark	K - znamená, že faktor môže byť ľahko absorbovaný kožou
Regulatory reference	Nariadenie vlády č. 355/2006 Z. z. (236/2020 Z. z.)
Slovenia - Occupational Exposure Limits	
Local name	etandiol (glikol)
OEL TWA	52 mg/m³
OEL TWA (ppm)	20 ppm
OEL STEL (mg/m³)	104 mg/m³
OEL STEL (ppm)	40 ppm
Remark	K (Lastnost lažjega prehajanja snovi v organizem skozi kožo), Y (Snovi, pri katerih ni nevarnosti za zarodek ob upoštevanju mejnih vrednosti in bat vrednosti), EU
Regulatory reference	Uradni list RS, št. 72/2021 z dne 11.5.2021
Spain - Occupational Exposure Limits	
Local name	Etilenglicol
VLA-ED (OEL TWA)	52 mg/m³ (Inhalable aerosol)
	20 ppm
VLA-EC (mg/m³)	104 mg/m³ (Inhalable aerosol)
VLA-EC (ppm)	40 ppm
Notes	skin
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2024. INSHT
Sweden - Occupational Exposure Limits	
Local name	Etylenglykol (Glykol)
NGV (OEL TWA)	25 mg/m³ Vapours
Nivågränsvärde (NVG) (ppm)	10 ppm
KGV (OEL STEL)	50 mg/m³ Vapours
	20 ppm
Remark	H (Ämnet kan lätt upptas genom huden. Det föreskrivna gränsvärdet bedöms ge tillräckligt skydd endast under förutsättning att huden är skyddad mot exponering för ämnet ifråga); 26 (Gränsvärdet gäller den sammanlagda koncentrationen av ånga och aerosol)
Regulatory reference	Hygieniska gränsvärden (AFS 2018:1)
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	52 mg/m³ (Inhalable aerosol)

ethanediol; ethylene glycol (107-21-1)	
	20 ppm
WEL STEL (OEL STEL)	104 mg/m³ (Inhalable aerosol)
WEL STEL (OEL STEL) [ppm]	40 ppm
Norway - Occupational Exposure Limits	
Local name	1,2-etandiol (Etylenglykol)
Grenseverdi (OEL TWA)	52 mg/m³
Grenseverdier (AN) (ppm)	20 ppm
Korttidsverdi (OEL STEL)	104 mg/m³
Grenseverdier (Korttidsverdi) (ppm)	40 ppm
Remark	H: Kjemikalier som kan tas opp gjennom huden; E: EU har en veiledende grenseverdi og/eller anmerkning for stoffet; 5) Grenseverdien er basert på beregning av summen av gass- og partikkelform (aerosol) av stoffet.
Regulatory reference	FOR-2023-12-18-2278
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA)	26 mg/m³ (Inhalable aerosol)
	10 ppm (Inhalable aerosol)
VLE [mg/m³]	52 mg/m³ (Inhalable aerosol)
VLE [ppm]	20 ppm (Inhalable aerosol)
USA - ACGIH - Occupational Exposure Limits	
Local name	Ethylene glycol
ACGIH TLV®-TWA (ppm)	25 ppm (V - Vapor fraction)
ACGIH TLV®-STEL (ppm)	10 ppm (I - Inhalable particulate matter, H - Aerosol only)
ACGIH TLV®-STEL Ceiling (mg/m³)	100 mg/m³
ACGIH TLV®-STEL Ceiling (ppm)	50 ppm (V - Vapor fraction)
Remark (ACGIH)	TLV® Basis: URT irr. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2024

sodium hydroxide; caustic soda (1310-73-2)	
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	2 mg/m³ (Inhalable aerosol)
MAK (OEL STEL)	4 mg/m³ (Inhalable aerosol)
Belgium - Occupational Exposure Limits	
OEL TWA	2 mg/m³
Denmark - Occupational Exposure Limits	
OEL TWA	2 mg/m³
OEL STEL	2 mg/m³
Finland - Occupational Exposure Limits	
HTP (OEL STEL)	2 mg/m³ Ceiling value
France - Occupational Exposure Limits	
VME (OEL TWA)	2 mg/m³

sodium hydroxide; caustic soda (1310-73-2)	
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	2 mg/m³
CK-érték	2 mg/m³
Ireland - Occupational Exposure Limits	
OEL (15 min ref) (mg/m3)	2 mg/m³ Ceiling value
Latvia - Occupational Exposure Limits	
OEL TWA	0.5 mg/m³
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	0.5 mg/m³
NDSP (mg/m³)	1 mg/m³
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	2 mg/m³
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	1 mg/m³ (Inhalable fraction)
KGV (OEL STEL)	2 mg/m³ (Inhalable fraction)
United Kingdom - Occupational Exposure Limits	
WEL STEL (OEL STEL)	2 mg/m³
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA)	2 mg/m³ (Inhalable aerosol)
VLE [mg/m³]	2 mg/m³ (Inhalable aerosol)
USA - ACGIH - Occupational Exposure Limits	
ACGIH TLV®-STEL Ceiling (mg/m³)	2 mg/m³

8.1.2. Recommended monitoring procedures

Monitoring methods	
Monitoring methods	Monitoring procedures should be chosen according to the indications set by national authorities or labour contracts. Refer to relevant legislation and in any case to the good practice of industrial hygiene.

8.1.3. Air contaminants formed

Applicable OEL and BLV for air contaminants : None known

8.1.4. DNEL and PNEC

Eni Antifreeze Bike S	
DNEL/DMEL (additional information)	
Additional information	Not applicable
PNEC (additional information)	
Additional information	Not applicable

ethanediol; ethylene glycol (107-21-1)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	106 mg/kg bodyweight/day
Long-term - local effects, inhalation	35 mg/m³

ethanediol; ethylene glycol (107-21-1)	
DNEL/DMEL (General population)	
Acute - local effects, inhalation	7 mg/m³
Long-term - systemic effects, dermal	53 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	10 mg/l
PNEC aqua (marine water)	1 mg/l
PNEC aqua (intermittent, freshwater)	10 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	37 mg/kg dwt
PNEC sediment (marine water)	3.7 mg/kg dwt
PNEC (Soil)	
PNEC soil	1.53 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	199.5 mg/l

2-ethylhexanoic acid and its salts, with the exception of those specified elsewhere in this Annex (149-57-5)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	2 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	14 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	1 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	3.5 mg/m³
Long-term - systemic effects, dermal	1 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0.398 mg/l
PNEC aqua (marine water)	0.0398 mg/l
PNEC aqua (intermittent, freshwater)	1 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	4.74 mg/kg dwt
PNEC sediment (marine water)	0.474 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.712 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	71.7 mg/l

Methyl-1H-benzotriazole (29385-43-1)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	300 µg/kg bodyweight/day
Long-term - systemic effects, inhalation	21.2 mg/m³

Methyl-1H-benzotriazole (29385-43-1)	
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	10 µg/kg bodyweight/day
Long-term - systemic effects, inhalation	350 µg/m³
Long-term - systemic effects, dermal	10 µg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	8 µg/l
PNEC aqua (marine water)	20 µg/l
PNEC aqua (intermittent, freshwater)	86 µg/l
PNEC aqua (intermittent, marine water)	53 µg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	117 µg/kg dw
PNEC sediment (marine water)	292 µg/kg dw
PNEC (Soil)	
PNEC soil	0.0187 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	39.4 mg/l

Note : The Derived No Effect Level (DNEL) is an estimated safe level of exposure that is derived from toxicity data in accord with specific guidance within the European REACH regulation. The DNEL may differ from an Occupational Exposure Limit (OEL) for the same chemical. OELs may be recommended by an individual company, a governmental regulatory body or an expert organization, such as the Scientific Committee for Occupational Exposure Limits (SCOEL) or the American Conference of Governmental Industrial Hygienists (ACGIH). OELs are considered to be safe exposure levels for a typical worker in an occupational setting for an 8-hour work shift, 40 hour work week, as a time weighted average (TWA) or a 15 minute short-term exposure limit (STEL). While also considered to be protective of health, OELs are derived by a process different from that of REACH.

8.1.5. Control banding

Control banding : None known

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:
Ensure good ventilation of the work station. Minimize exposure to mists/vapours/aerosol.

8.2.2. Personal protection equipment

Personal protective equipment (for industrial or professional use):
Protective clothing. Safety shoes or boots.

Personal protective equipment symbol(s):

8.2.2.1. Eye and face protection

Eye protection:
Not required for normal conditions of use. When there is a risk of contact with the eyes, use safety goggles or other means of protection (face shield). If necessary, refer to national standards or to the EN 166 standard.

8.2.2.2. Skin protection

Skin and body protection:
Protective apron. EN 340

Hand protection:
In case of repeated or prolonged contact wear gloves. Adequate materials: nitrile (NBR), with a protection index ≥ 5 (permeation time ≥ 240 mins). Personal hygiene is a key element for an effective hand care. Gloves must be worn only with clean hands. After wearing gloves, hands must be carefully washed and dried. Not required

8.2.2.3. Respiratory protection

Respiratory protection:
Not necessary with sufficient ventilation. Independently from other possible actions (technical modifications, operating procedures, and other means to limit the exposure of workers), personal protection equipment can be used according to necessity. Open or well ventilated spaces: if the product is handled without adequate containment: use full or half-face masks with adequate filter for mists and organic vapours. (EN 136/140/145). Closed or confined areas (e.g. tank interiors): the use of protection measures for airways (masks or self-contained breathing apparatus), must be assessed according to the specific activity, as well as level and duration of predicted exposure. Filter AX (brown)

8.2.2.4. Thermal hazards

Thermal hazard protection:
None in normal use conditions.

8.2.3. Environmental exposure controls

Environmental exposure controls:
Storage areas/installations should be designed with adequate bunds so as to prevent ground and water pollution in case of leaks or spills. Do not discharge the product into the environment. Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

Consumer exposure controls:
Ensure adequate air ventilation. Avoid excessive or improper use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	pink.
Appearance	:	Liquid, bright & clear.
Odour	:	Glycol.
Odour threshold	:	There are no data available on the preparation/mixture itself.
Melting point	:	Not applicable
Freezing point	:	-40 °C (ASTM D 1177)
Softening point	:	Lack of data (on mixture / components of the mixture) - Data not available
Boiling point	:	> 107 °C (ASTM D 1120)
Flammability	:	Not flammable
Lower explosion limit	:	Lack of data (on mixture / components of the mixture) - Data not available
Upper explosion limit	:	Lack of data (on mixture / components of the mixture) - Data not available
Flash point	:	> 60 °C Lack of data (on mixture / components of the mixture) - Data not available
Auto-ignition temperature	:	Lack of data (on mixture / components of the mixture) - Data not available
Decomposition temperature	:	Lack of data (on mixture / components of the mixture) - Data not available
pH	:	7 – 8.5
Viscosity, kinematic	:	Lack of data (on mixture / components of the mixture) - Data not available
Viscosity, dynamic	:	Lack of data (on mixture / components of the mixture) - Data not available
Solubility	:	Soluble in water. Water: Complete.
Log Kow	:	Not determined
Vapour pressure	:	< 0.0001 Pa
Vapour pressure at 50°C	:	Lack of data (on mixture / components of the mixture) - Data not available
Density	:	Not determined
Relative density	:	Lack of data (on mixture / components of the mixture) - Data not available
Relative vapour density at 20°C	:	Lack of data (on mixture / components of the mixture) - Data not available
Particle characteristics	:	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

Relative evaporation rate (butylacetate=1) : Lack of data (on mixture / components of the mixture) - Data not available

SECTION 10: Stability and reactivity

10.1. Reactivity

This mixture does not offer any further hazard for reactivity, except what is reported in the following paragraphs.

10.2. Chemical stability

Stable product, according to its intrinsic properties.

10.3. Possibility of hazardous reactions

None (in normal conditions of storage and handling).

10.4. Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition.

10.5. Incompatible materials

Alkali metals. Strong oxidants and strong acids.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition generates : Oxygenated compounds (aldehydes, etc.), Carbon dioxide, Carbon monoxide.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Harmful if swallowed.
Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)
Additional information : (according to composition)
The toxic (fatal) dose for pure ethylene glycol has been estimated 1.4 ml/kg wt (about 100 ml for an adult person).
The effects may be delayed.

Eni Antifreeze Bike S	
ATE (oral)	925.926 mg/kg bodyweight

ethanediol; ethylene glycol (107-21-1)	
LD50 oral rat	7712 mg/kg bodyweight
LD50 dermal	> 3500 mg/kg (mouse)
LC50 Inhalation - Rat	> 2.5 mg/l (6h)

2-ethylhexanoic acid and its salts, with the exception of those specified elsewhere in this Annex (149-57-5)	
LD50 oral rat	2043 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 1445 - 2890
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

Methyl-1H-benzotriazole (29385-43-1)	
LD50 oral rat	≈ 720 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 700 - 800
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

sodium hydroxide; caustic soda (1310-73-2)	
LD50 dermal rat	1350 mg/kg bodyweight
LD50 dermal rabbit	1350 mg/kg bodyweight

Skin corrosion/irritation : Causes skin irritation.
pH: 7 – 8.5

Additional information : (according to composition)

Serious eye damage/irritation : Causes serious eye irritation.
pH: 7 – 8.5

Additional information : (according to composition)

Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)

Additional information : (according to composition)

Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)

Additional information : (according to composition)

Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)

Additional information : (according to composition)

ethanediol; ethylene glycol (107-21-1)	
NOAEL (chronic, oral, animal/male, 2 years)	1500 mg/kg bodyweight Mouse

Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)

Additional information : (according to composition)

Methyl-1H-benzotriazole (29385-43-1)	
NOAEL (animal/male, F0/P)	90 mg/kg bodyweight
NOAEL (animal/male, F1)	30 mg/kg bodyweight

STOT-single exposure : Not classified (Based on available data, the classification criteria are not met)

Additional information : (according to composition)

STOT-repeated exposure : May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).

Additional information : (according to composition)
There are potential chronic health effects to consider
The ethylene glycol present in this formulation may cause intoxication, central nervous system depression (incoordination, dizziness), respiratory failure,liver and kidney damage.

ethanediol; ethylene glycol (107-21-1)	
NOAEL (oral, rat, 90 days)	150 mg/kg bodyweight/day 12 months.
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

2-ethylhexanoic acid and its salts, with the exception of those specified elsewhere in this Annex (149-57-5)	
NOAEL (oral, rat, 90 days)	≈ 300 mg/kg bodyweight Animal: rat, Guideline: EPA OTS 795.2600 (Subchronic Oral Toxicity Test)

Methyl-1H-benzotriazole (29385-43-1)	
NOAEL (oral, rat, 90 days)	150 mg/kg bodyweight/day

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

Additional information : (according to composition)

Eni Antifreeze Bike S	
Viscosity, kinematic	Lack of data (on mixture / components of the mixture) - Data not available

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : None known,The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are 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 at a concentration equal to or greater than 0,1 %

11.2.2. Other information

Potential adverse human health effects and symptoms : Harmful if swallowed,Prolonged or repeated skin contact may cause a slight transient irritation,May cause damage to organs (kidneys) through prolonged or repeated exposure (if swallowed),Avoid all eye and skin contact and do not breathe vapour and mist

Other information : None

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment. An uncontrolled release to the environment may nevertheless produce a contamination of different environmental compartments (soil, underground, surface water bodies, aquifers). Handle according to general working hygiene practices to avoid pollution and release into the environment.

Ecology - water : This product is soluble in water.

Hazardous to the aquatic environment, short–term (acute) : Not classified (Based on available data, the classification criteria are not met)

Hazardous to the aquatic environment, long–term (chronic) : Not classified (Based on available data, the classification criteria are not met)

ethylene glycol (107-21-1)	
LC50 fish 1	15380 mg/l (LC10 - 96h)
LC50 fish 2	72860 mg/l (Pimephales promelas)
EC50 Daphnia 1	8590 mg/l (EC10 - 48h)
EC50 Daphnia 2	100 mg/l
EC50 96h - Algae [1]	3536 – 13000 mg/l
ErC50 (algae)	≥ 100 mg/l (EC10)
NOEC (chronic)	15380 – 32000 mg/l

2-ethylhexanoic acid and its salts, with the exception of those specified elsewhere in this Annex (149-57-5)	
LC50 fish 1	> 100 mg/l Test organisms (species): Oryzias latipes
EC50 72h - Algae [1]	500 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
NOEC (chronic)	18 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

Methyl-1H-benzotriazole (29385-43-1)	
LC50 fish 1	25.5 mg/l (Pimephales promelas)
EC50 Daphnia 1	8.58 mg/l (Daphnia galeata, 2 d)
EC50 other aquatic organisms 1	15.8 mg/l Test organisms (species): other aquatic crustacea:
EC50 other aquatic organisms 2	8.58 mg/l Test organisms (species): other aquatic crustacea:
EC50 72h - Algae [1]	75 mg/l
LOEC (chronic)	37.6 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	18.4 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

Methyl-1H-benzotriazole (29385-43-1)	
NOEC chronic crustacea	18.4 mg/l (Daphnia magna, 21d)
NOEC chronic algae	1.18 mg/l (freshwater)

Sodium hydroxide (1310-73-2)	
LC50 fish 1	125 mg/l (96h - Gambusia affinis)
EC50 Daphnia 1	40 mg/l (48h)

12.2. Persistence and degradability

Eni Antifreeze Bike S	
Persistence and degradability	The most significant constituents of the product should be considered as "readily biodegradable".

ethylene glycol (107-21-1)	
Persistence and degradability	Readily biodegradable..
Biochemical oxygen demand (BOD)	0.36 – 0.4 g O_2/g substance
Chemical oxygen demand (COD)	1.21 g O_2/g substance
ThOD	1.26 g O_2/g substance

2-ethylhexanoic acid and its salts, with the exception of those specified elsewhere in this Annex (149-57-5)	
Persistence and degradability	Rapidly degradable

Methyl-1H-benzotriazole (29385-43-1)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	4 % (28 d, OECD TG 301 F)

Sodium hydroxide (1310-73-2)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

Eni Antifreeze Bike S	
Log Kow	Not determined
Bioaccumulative potential	Not established.

ethylene glycol (107-21-1)	
Log Pow	-1.36

Methyl-1H-benzotriazole (29385-43-1)	
Log Kow	1.079 – 1.083 (25°C)

12.4. Mobility in soil

Eni Antifreeze Bike S	
Ecology - soil	No data available.

12.5. Results of PBT and vPvB assessment

Eni Antifreeze Bike S
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

Eni Antifreeze Bike S	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	
Results of PBT-vPvB assessment	The components in this formulation do not meet the criteria for classification as PBT or vPvB. The product should be considered as "Not persistent" in the environment, according to the REACH Annex XIII criteria (point 1.1)

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	ethylene glycol (107-21-1), 2-ethylhexanoic acid and its salts, with the exception of those specified elsewhere in this Annex (149-57-5), Methyl-1H-benzotriazole (29385-43-1), Sodium hydroxide (1310-73-2)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	ethylene glycol (107-21-1), 2-ethylhexanoic acid and its salts, with the exception of those specified elsewhere in this Annex (149-57-5), Methyl-1H-benzotriazole (29385-43-1), Sodium hydroxide (1310-73-2)

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : Endocrine disrupting properties (Article 57(f) — environment): None known. The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are 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 at a concentration equal to or greater than 0,1 %.

12.7. Other adverse effects

Other adverse effects : None.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Do not dispose of the product, either new or used, by dumping on the ground, or discharging into sewers, tunnels, lakes or water courses. Deliver to a qualified official collector.

Sewage disposal recommendations : Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed. Dispose of in a safe manner in accordance with local/national regulations.

Product/Packaging disposal recommendations : European Waste Catalogue code(s) (Decision 2001/118/CE): 16 01 14* (antifreeze fluids containing dangerous substances). This EWC code is only a general indication, and takes into account the original composition of the product and its intended use. The user has the responsibility of choosing the right EWC code, considering the actual use of the product, alterations and contaminations.

Additional information : Do not cut, weld, bore, burn or incinerate emptied containers, unless they have been cleaned and declared safe.

Ecology - waste materials : The product as it is does not contain halogenated substances.

EURAL code (EWC) : 16 01 14* - antifreeze fluids containing dangerous substances

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not regulated for transport				
14.2. UN proper shipping name				
Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.

ADR	IMDG	IATA	ADN	RID
14.3. Transport hazard class(es)				
Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.4. Packing group				
Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.5. Environmental hazards				
Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
None.				

14.6. Special precautions for user

Overland transport
Not regulated.

Transport by sea
Not regulated.

Air transport
Not regulated.

Inland waterway transport
Not regulated.

Rail transport
Not regulated.

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Other information, restriction and prohibition regulations : Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). (et sequens). Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (et sequens). Directives 89/391/CEE, 89/654/CEE, 89/655/CEE, 89/656/CEE, 90/269/CEE, 90/270/CEE, 90/394/CEE, 90/679/CEE, 93/88/CEE, 95/63/CE, 97/42/CE, 98/24/CE, 99/38/CE, 99/92/CE, 2001/45/CE, 2003/10/CE, 2003/18/CE (Health and safety on the workplace). Directive 2012/18/CE (Control of major-accident hazards involving dangerous substances). Directive 2004/42/CE (Limitation of emissions of Volatile Organic Compounds). Directive 98/24/EC (protection of the health and safety of workers from the risks related to chemical agents at work). Directive 92/85/CE (measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding). Substances Depleting the Ozone layer (1005/2009) - Annex I Substances (ODP). POP (2019/1021) - Persistent Organic Pollutants. Regulation EU (649/2012) - Export and Import of hazardous chemicals (PIC). Commission Delegated Regulation (EU) 2017/2100. Commission Regulation (EU) 2018/605.

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	**Applicable on**	**Entry title or description**
3(b)	ethanediol; ethylene glycol ; 2-ethylhexanoic acid and its salts, with the exception of those specified elsewhere in this Annex ; Methyl-1H-benzotriazole	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: 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 effects, 3.9 and 3.10
3(c)	Methyl-1H-benzotriazole	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: Hazard class 4.1
30.	2-ethylhexanoic acid and its salts, with the exception of those specified elsewhere in this Annex	Substances which are classified as reproductive toxicant category 1A or 1B in Part 3 of Annex VI to Regulation (EC) No 1272/2008 and are listed in Appendix 5 or Appendix 6, respectively.

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

No ingredients are included in the REACH Candidate list (> 0,1 % m/m).

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

National adoption of EU Directives concerning health and safety on the workplace.
Relevant national laws on protection of the health of pregnant workers (National adoption of Dir. 92/85/EEC).
National adoption of EU Directives concerning control of major-accident hazards involving dangerous substances (2012/18/CE).
Relevant national laws on prevention of water pollution.

Finland

Finnish National Regulations : Occupational Safety and Health Act No. 738/2002.

France

Maladies professionelles (F)

Code	Description
RG 84	Conditions caused by liquid organic solvents for professional use: saturated or unsaturated aliphatic or cyclic liquid hydrocarbons and mixtures thereof; liquid halogenated hydrocarbons; nitrated derivatives of aliphatic hydrocarbons; alcohols; glycols, glycol ethers; ketones; aldehydes; aliphatic and cyclic ethers, including tetrahydrofuran; esters; dimethylformamide and dimethylacetamine; acetonitrile and propionitrile; pyridine; dimethylsulfone and dimethylsulfoxide

Germany

Employment restrictions : Employment prohibitions or restrictions on the protection of young people at work according to § 22 JArbSchG in the case of formation of hazardous substances have to be observed.

National Rules and Recommendations : TRGS 400: Hazard assessment for activities involving Hazardous Substances.
TRGS 401: Risks resulting from skin contact - identification, assessment, measures.
TRGS 402: Identification and Assessment of the Risks from Activities involving Hazardous Substances: Inhalation Exposure.
TRGS 500: Protective measures.
TRGS 555: Working instruction and information for workers.
TRGS 900: Occupational Exposure Limits.

VbF class (D) : Not applicable.

Water hazard class (WGK) (D) : WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1).

WGK remark : Classification is carried out on the basis of the Ordinance on facilities for handling substances that are hazardous to water (Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV)) of 18 April 2017 (BGBl 2017, Teil I, Nr. 22, Seite 905).

Hazardous Incident Ordinance (12. BImSchV) : Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

Saneringsinspanningen : C - Minimize discharge

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed

SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : None of the components are listed

SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

Denmark

Classification remarks : Emergency management guidelines for the storage of flammable liquids must be followed

Danish National Regulations : Young people under 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with it

Norway

Norwegian National Regulations : Working Environment Act (LOV-2005-06-17 NO. 62).
People under the age of 18 may not work with this product at all.

Sweden

Swedish National Regulations : This product is in compliance with Ordinance 1998:944.
Work Environment Act (1977: 1160).
Chemical Hazards in the Working Environment (AFS 2011:19).

15.2. Chemical safety assessment

For this mixture a chemical safety assessment has been not carried out

A chemical safety assessment has been carried out for the following components of this mixture::
ethanediol; ethylene glycol
sodium hydroxide; caustic soda

SECTION 16: Other information

Indication of changes

Section	Changed item	Change	Comments
1.3	Supplier information	Modified	

Indication of changes			
Section	**Changed item**	**Change**	**Comments**
8.2	Eye protection	Modified	
8.2	Skin and body protection	Modified	
9.1	Density	Added	

Abbreviations and acronyms:	
	Complete text of the H phrases quoted in this Safety Data Sheet. These phrases are reported here for information only, and MAY NOT correspond to the classification of the product.
	N/D = not available
	N/A = not applicable
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Effective concentration for 50 percent of test population (median effective concentration)
EC-No.	European Community number
ED	Endocrine disrupting properties
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Lethal concentration for 50 percent of test population (median lethal concentration)
LD50	Lethal dose for 50 percent of test population (median lethal dose)
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals, Regulation (EC) No 1907/2006
RID	Regulation concerning the International Carriage of Dangerous Goods by Railways
SDS	Safety Data Sheet
STP	Sewage treatment plant
VOC	Volatile Organic Compounds

Abbreviations and acronyms:	
vPvB	Very Persistent and Very Bioaccumulative
WGK	Water Hazard Class

Data sources : This Safety Data Sheet is based on the real characteristics of the components and their combination, taking into account the information provided by the suppliers.

Training advice : Provide adequate training to professional operators for the use of PPEs, according to the information contained in this Safety Data Sheet.

Other information : Do not use the product for any purposes that have not been advised by the manufacturer.

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H360D	May damage the unborn child.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
Met. Corr. 1	Corrosive to metals, Category 1
Repr. 1B	Reproductive toxicity, Category 1B
Repr. 2	Reproductive toxicity, Category 2
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Acute Tox. 4 (Oral)	H302	Calculation method
Skin Irrit. 2	H315	Calculation method
Eye Irrit. 2	H319	Calculation method
STOT RE 2	H373	Calculation method

Safety Data Sheet (SDS), EU

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.