

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

1.1. Product identifier

Product form : Mixture
Name : 20 ml total hardness 1 (liquid)
Trade name : 20 ml total hardness 1 (liquid)
Product code : POLR-HL1_A

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

Relevant identified uses

Main use category : Reagent for water analysis

1.3. Details of the supplier of the safety data sheet

labbox labware s.l.
Migjorn, 1
P.O. Box Barcelona (SPAIN)
08338 Premia de Dalt, SPAIN
ES
T +34 937 07 79 70, F +34 937 909 532
info@labbox.com, www.labbox.com

1.4. Emergency telephone number

Emergency number : +34 937 077 970 (For technical information_Office Hours) In case of medical emergency phone 112 or to your local emergency number.

Country/Area	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA	0344 892 0111	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [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

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

: Warning

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Hazard statements (CLP)	: H302 - Harmful if swallowed. H315 - Causes skin irritation. H319 - Causes serious eye irritation. H373 - May cause damage to organs through prolonged or repeated exposure.
Precautionary statements (CLP)	: P264 - Wash hands, forearms and face thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P280 - Wear protective gloves/protective clothing/eye protection/face protection. P313 - Get medical advice/attention. P337 - If eye irritation persists: P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

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

Component	
PBT: not relevant – no registration required	Ethylene glycol (107-21-1)

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 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

Component	
Substance(s) not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is 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	Sodium hydroxide (1310-73-2)

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Ethylene glycol	CAS-No.: 107-21-1 EC-No.: 203-473-3 EC Index-No.: 603-027-00-1 REACH-no: 01-2119456816-28	30 - 50	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
Sodium hydroxide	CAS-No.: 1310-73-2 EC-No.: 215-185-5 EC Index-No.: 011-002-00-6	<1,5	Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318

Specific concentration limits:		
Name	Product identifier	Specific concentration limits (%)
Sodium hydroxide	CAS-No.: 1310-73-2 EC-No.: 215-185-5 EC Index-No.: 011-002-00-6	(0,5 $\leq$ C < 2) Skin Irrit. 2; H315 (0,5 $\leq$ C < 2) Eye Irrit. 2; H319 (2 $\leq$ C < 5) Skin Corr. 1B; H314 (5 $\leq$ C < 100) Skin Corr. 1A; H314

Full text of H and EUH statements: see section 16

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SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a physician immediately.
First-aid measures after skin contact	: Gently wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Immediately rinse with water for a prolonged period while holding the eyelids wide open. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Rinse mouth out with water. Do not induce vomiting. Get medical advice/attention.

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

Symptoms/effects after inhalation	: Burning sensation.
Symptoms/effects after eye contact	: redness, itching, tears.

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

Never give anything by mouth to an unconscious person.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Making extinguishing agents environment-friendly.
Unsuitable extinguishing media	: Strong water jet.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions	: Exercise caution when fighting any chemical fire.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Emergency procedures	: Do not get in eyes, on skin, or on clothing. Only qualified personnel equipped with suitable protective equipment may intervene.
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6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Absorb spilled material with sand or earth.
Other information	: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

See Heading 8. For further information refer to section 13.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Avoid any direct contact with the product.
- Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Store in a well-ventilated place. Keep container tightly closed.
- Packaging materials : Keep only in the original container in a cool, well-ventilated place away from combustible materials.

Switzerland

- Storage class (LK) : LK 6.1 - Toxic materials

7.3. Specific end use(s)

Laboratory chemicals. Reagent for water analysis.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

20 ml total hardness 1 (liquid)

EU - Indicative Occupational Exposure Limit (IOEL)

IOEL TWA	52 mg/m ³
	20 ppm
IOEL STEL	104 mg/m ³
	40 ppm

Austria - Occupational Exposure Limits

MAK (OEL TWA)	26 mg/m ³
	10 ppm
MAK (OEL STEL)	52 mg/m ³
	20 ppm

Bulgaria - Occupational Exposure Limits

OEL TWA	52 mg/m ³
	20 ppm
OEL STEL	104 mg/m ³
	20 ppm

Croatia - Occupational Exposure Limits

GVI (OEL TWA)	52 mg/m ³
	20 ppm
KGVI (OEL STEL)	104 mg/m ³
	40 ppm

Cyprus - Occupational Exposure Limits

OEL TWA	52 mg/m ³
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	20 ppm
OEL STEL	104 mg/m ³
	40 ppm
Czech Republic - Occupational Exposure Limits	
PEL (OEL TWA)	50 mg/m ³
NPK-P (OEL Ceiling)	100 mg/m ³
Denmark - Occupational Exposure Limits	
OEL TWA	26 mg/m ³
	10 ppm
OEL STEL	10 mg/m ³
Estonia - Occupational Exposure Limits	
OEL TWA	52 mg/m ³
	20 ppm
OEL STEL	104 mg/m ³
	40 ppm
Finland - Occupational Exposure Limits	
HTP (OEL TWA)	50 mg/m ³
	20 ppm
HTP (OEL STEL)	100 mg/m ³
	40 ppm
France - Occupational Exposure Limits	
VME (OEL TWA)	52 mg/m ³
	20 ppm
VLE (OEL Ceiling/STEL)	104 mg/m ³
	40 ppm
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA)	26 mg/m ³
	10 ppm
Greece - Occupational Exposure Limits	
OEL TWA	125 mg/m ³
	50 ppm
OEL STEL	125 mg/m ³
	50 ppm
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	52 mg/m ³
CK (OEL STEL)	104 mg/m ³
Ireland - Occupational Exposure Limits	
OEL TWA	10 mg/m ³
	20 ppm

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20 ml total hardness 1 (liquid)	
OEL STEL	52 mg/m ³
	40 ppm
Italy - Occupational Exposure Limits	
OEL TWA	52 mg/m ³
	20 ppm
OEL STEL	104 mg/m ³
	40 ppm
Latvia - Occupational Exposure Limits	
OEL TWA	52 mg/m ³
	20 ppm
OEL STEL	104 mg/m ³
	40 ppm
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	25 mg/m ³
	10 ppm
TPRV (OEL STEL)	50 mg/m ³
	20 ppm
Luxembourg - Occupational Exposure Limits	
OEL TWA	52 mg/m ³
	20 ppm
OEL STEL	104 mg/m ³
	40 ppm
Malta - Occupational Exposure Limits	
OEL TWA	52 mg/m ³
	20 ppm
OEL STEL	104 mg/m ³
	40 ppm
Netherlands - Occupational Exposure Limits	
MAC-TGG (OEL TWA)	52 mg/m ³
	10 ppm
MAC-15 (OEL STEL)	104 mg/m ³
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	15 mg/m ³
NDSP (OEL Ceiling)	50 mg/m ³
Portugal - Occupational Exposure Limits	
OEL TWA	52 mg/m ³
	20 ppm
OEL STEL	104 mg/m ³
	40 ppm

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20 ml total hardness 1 (liquid)	
Romania - Occupational Exposure Limits	
OEL TWA	52 mg/m ³
	20 ppm
OEL STEL	104 mg/m ³
	40 ppm
Slovakia - Occupational Exposure Limits	
NPHV (OEL TWA)	52 mg/m ³
	20 ppm
NPHV (OEL STEL)	104 mg/m ³
Slovenia - Occupational Exposure Limits	
OEL TWA	52 mg/m ³
	20 ppm
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	52 mg/m ³
	20 ppm
VLA-EC (OEL STEL)	104 mg/m ³
	40 ppm
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	25 mg/m ³
	10 ppm
KTV (OEL STEL)	104 mg/m ³
	40 ppm
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	10 mg/m ³
	20 ppm
WEL STEL	104 mg/m ³
	40 ppm
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA)	52 mg/m ³
	20 ppm
Korttidsverdi (OEL STEL)	104 mg/m ³
	40 ppm
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA)	26 mg/m ³
	10 ppm
KZGW (OEL STEL)	52 mg/m ³
	20 ppm

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Ethylene glycol (107-21-1)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Ethylene glycol
IOEL TWA	52 mg/m ³
	20 ppm
IOEL STEL	104 mg/m ³
	40 ppm
Remark	Skin
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
France - Occupational Exposure Limits	
Local name	Ethylèneglycol
VME (OEL TWA)	52 mg/m ³ (vapeur)
	20 ppm (vapeur)
VLE (OEL Ceiling/STEL)	104 mg/m ³ (vapeur)
	40 ppm (vapeur)
Remark	Valeurs réglementaires indicatives; risque de pénétration percutanée
Regulatory reference	Arrêté du 30 juin 2004 modifié (réf.: INRS ED 984, 2016)
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	Ethandiol
AGW (OEL TWA)	26 mg/m ³
	10 ppm
Limitation of exposure peaks	2(I)
Remark	DFG,EU,H,Y,11
Regulatory reference	TRGS900
Greece - Occupational Exposure Limits	
Local name	Αιθυλενογλυκόλη (σπμοί)
OEL TWA	125 mg/m ³
	50 ppm
OEL STEL	125 mg/m ³
	50 ppm
Regulatory reference	Π.Δ. 90/1999
Italy - Occupational Exposure Limits	
Local name	Etilen glicol
OEL TWA	52 mg/m ³
	20 ppm
OEL STEL	104 mg/m ³
	40 ppm
Remark	pelle
Regulatory reference	Allegato XXXVIII del D.Lgs. 9 aprile 2008, n. 81 e s.m.i.

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Ethylene glycol (107-21-1)	
Portugal - Occupational Exposure Limits	
Local name	Etilenoglicol
OEL Ceiling	100 mg/m ³ H (Apenas aerossol)
	100 ppm H (Apenas aerossol)
Regulatory reference	Norma Portuguesa NP 1796:2014
Romania - Occupational Exposure Limits	
Local name	Etilenglicol/Etandiol
OEL TWA	52 mg/m ³
	20 ppm
OEL STEL	104 mg/m ³
	40 ppm
Regulatory reference	Hotărârea nr. 584/2018
Spain - Occupational Exposure Limits	
Local name	Etilenglicol
VLA-ED (OEL TWA)	52 mg/m ³
	20 ppm
VLA-EC (OEL STEL)	104 mg/m ³
	40 ppm
Remark	Vía dérmica (Indica que, en las exposiciones a esta sustancia, la aportación por la vía cutánea puede resultar significativa para el contenido corporal total si no se adoptan medidas para prevenir la absorción. En estas situaciones, es aconsejable la utilización del control biológico para poder cuantificar la cantidad global absorbida del contaminante. Para más información véase el Apartado 5 de este documento), VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo. Todos estos agentes químicos figuran al menos en una de las directivas de valores límite indicativos publicadas hasta ahora (ver Anexo C. Bibliografía). Los estados miembros disponen de un tiempo fijado en dichas directivas para su transposición a los valores límites de cada país miembro. Una vez adoptados, estos valores tienen la misma validez que el resto de los valores adoptados por el país).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2019. INSHT
United Kingdom - Occupational Exposure Limits	
Local name	Ethane-1,2-diol
WEL TWA (OEL TWA)	10 mg/m ³ particulate
	52 mg/m ³ vapour
	20 ppm vapour
WEL STEL	104 mg/m ³ vapour
	40 ppm vapour
Remark	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
Regulatory reference	EH40/2005 (Third edition, 2018). HSE

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8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure. EN 374.

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:

Wear security glasses which protect from splashes

Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves					EN ISO 374

Respiratory protection

Respiratory protection:

No respiratory protection needed under normal use conditions. In case of inadequate ventilation wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: red. brown.
Appearance	: Solution.
Odour	: odourless.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: 8,1
Viscosity, kinematic	: Not available
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: Not available
Relative density	: Not available

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Relative vapour density at 20 °C : Not available
Particle characteristics : Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

Strong acids. Strong bases. Oxidizing agent.

10.6. Hazardous decomposition products

No additional information available

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
Acute toxicity (inhalation) : Not classified

20 ml total hardness 1 (liquid)	
LD50 oral rat	4700 mg/kg
LD50 oral	325 mg/kg
LD50 dermal rat	10600 mg/kg
LD50 dermal rabbit	1350 mg/kg

Ethylene glycol (107-21-1)	
LD50 oral rat	7712 mg/kg bodyweight Animal: rat
LD50 dermal rat	> 3500 mg/kg
LC50 inhalation rat (mg/l)	> 2,5 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.
pH: 8,1

Sodium hydroxide (1310-73-2)	
pH	14

Serious eye damage/irritation : Causes serious eye irritation.
pH: 8,1

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Sodium hydroxide (1310-73-2)

pH	14
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

Ethylene glycol (107-21-1)

NOAEL (chronic, oral, animal/male, 2 years)	1500 mg/kg bodyweight Animal: mouse, Animal sex: male, Remarks on results: other:Effect type: carcinogenicity (migrated information)
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: May cause damage to organs through prolonged or repeated exposure.

Ethylene glycol (107-21-1)

STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified

Ethylene glycol (107-21-1)

Viscosity, kinematic	14,505 mm ² /s
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11.2. Information on other hazards

Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : Not applicable

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified
Hazardous to the aquatic environment, long-term (chronic) : Not classified

20 ml total hardness 1 (liquid)

LC50 - Fish [1]	40000 – 60000
EC50 - Daphnia [1]	46300 mg/l
EC50 72h - Algae [1]	6500 – 13000 mg/l

Ethylene glycol (107-21-1)

LC50 - Fish [1]	72860 mg/l Test organisms (species): Pimephales promelas
EC50 - Daphnia [1]	> 100 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 100 mg/l
EC50 96h - Algae [1]	3536 mg/l Test organisms (species): other:greenn algae
EC50 96h - Algae [2]	6500 – 13000 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
NOEC (chronic)	≥ 1000 mg/l Test organisms (species): Americamysis bahia (previous name: Mysidopsis bahia) Duration: '23 d'

Sodium hydroxide (1310-73-2)

EC50 - Daphnia [1]	40,4 mg/l Test organisms (species): Ceriodaphnia sp.
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12.2. Persistence and degradability

20 ml total hardness 1 (liquid)

Persistence and degradability	Rapidly degradable
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Ethylene glycol (107-21-1)

Persistence and degradability	Rapidly degradable
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Biodegradation	90 %
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Sodium hydroxide (1310-73-2)

Persistence and degradability	Rapidly degradable
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12.3. Bioaccumulative potential

Ethylene glycol (107-21-1)

Partition coefficient n-octanol/water (Log Pow)	-1,36
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Bioaccumulative potential	Low.
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Sodium hydroxide (1310-73-2)

Bioaccumulative potential	Not established.
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12.4. Mobility in soil

Ethylene glycol (107-21-1)

Surface tension	4,989 N/m
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12.5. Results of PBT and vPvB assessment

20 ml total hardness 1 (liquid)

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

Component

PBT: not relevant – no registration required	Ethylene glycol (107-21-1)
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12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : Not applicable.

12.7. Other adverse effects

Other adverse effects : Do not discharge into drains or rivers.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Must follow special treatment according to local regulation.

SECTION 14: Transport information

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

14.1. UN number or ID number

UN-No. (ADR)	: Not applicable
UN-No. (IMDG)	: Not applicable

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UN-No. (IATA)	: Not applicable
UN-No. (ADN)	: Not applicable
UN-No. (RID)	: Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: Not applicable
Proper Shipping Name (IMDG)	: Not applicable
Proper Shipping Name (IATA)	: Not applicable
Proper Shipping Name (ADN)	: Not applicable
Proper Shipping Name (RID)	: Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: Not applicable
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IMDG

Transport hazard class(es) (IMDG)	: Not applicable
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IATA

Transport hazard class(es) (IATA)	: Not applicable
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ADN

Transport hazard class(es) (ADN)	: Not applicable
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RID

Transport hazard class(es) (RID)	: Not applicable
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14.4. Packing group

Packing group (ADR)	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable
Packing group (ADN)	: Not applicable
Packing group (RID)	: Not applicable

14.5. Environmental hazards

Other information	: No supplementary information available
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14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

Contains no REACH substances with Annex XVII restrictions

REACH Annex XIV (Authorisation List)

Contains no REACH Annex XIV substances

REACH Candidate List (SVHC)

Contains no substance on the REACH candidate list

PIC Regulation (Prior Informed Consent)

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

POP Regulation (Persistent Organic Pollutants)

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Ozone Regulation (2024/590)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 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 subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Drug Precursors Regulation (273/2004)

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

National regulations

France

Occupational diseases	
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 dimethylacetamide; acetonitrile and propionitrile; pyridine; dimethylsulfone and dimethylsulfoxide

Germany

VOC ordinance (ChemVOCFarbV)

:

Water hazard class (WGK)

: WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1).

Hazardous Incident Ordinance (12. BImSchV)

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

Netherlands

SZW-lijst van kankerverwekkende stoffen

: None of the components are listed

SZW-lijst van mutagene stoffen

: None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding

: None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid

: None of the components are listed

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NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

Denmark

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

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 2	Specific target organ toxicity — Repeated exposure, 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.
H373	May cause damage to organs through prolonged or repeated exposure.

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.

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

1.1. Product identifier

Product form : Mixture
Name : 10 ml total hardness 2 (liquid)
Trade name : 10 ml total hardness 2 (liquid)
Product code : POLR-HL1_B

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

Relevant identified uses

Main use category : Reagent for water analysis

1.3. Details of the supplier of the safety data sheet

labbox labware s.l.
Migjorn, 1
P.O. Box Barcelona (SPAIN)
08338 Premia de Dalt, SPAIN
ES
T +34 937 07 79 70, F +34 937 909 532
info@labbox.com, www.labbox.com

1.4. Emergency telephone number

Emergency number : +34 937 077 970 (For technical information_Office Hours) In case of medical emergency phone 112 or to your local emergency number.

Country/Area	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA	0344 892 0111	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute toxicity (oral), Category 4 H302
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

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP)



GHS07

GHS08

Signal word (CLP)

: Warning

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Hazard statements (CLP)	: H302 - Harmful if swallowed. H319 - Causes serious eye irritation. H373 - May cause damage to organs through prolonged or repeated exposure.
Precautionary statements (CLP)	: P264 - Wash hands, forearms and face thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P280 - Wear protective gloves/protective clothing/eye protection/face protection. P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P337+P313 - If eye irritation persists: Get medical advice/attention. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

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

Component	
PBT: not relevant – no registration required	Ethylene glycol (107-21-1)

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 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

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Ethylene glycol	CAS-No.: 107-21-1 EC-No.: 203-473-3 EC Index-No.: 603-027-00-1 REACH-no: 01-2119456816-28	40 - 60	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
Acetic acid glacial	CAS-No.: 64-19-7 EC-No.: 200-580-7 EC Index-No.: 607-002-00-6	1 - 5	Flam. Liq. 3, H226 Skin Corr. 1A, H314

Specific concentration limits:		
Name	Product identifier	Specific concentration limits (%)
Acetic acid glacial	CAS-No.: 64-19-7 EC-No.: 200-580-7 EC Index-No.: 607-002-00-6	(10 $\leq$ C < 25) Eye Irrit. 2; H319 (10 $\leq$ C < 25) Skin Irrit. 2; H315 (25 $\leq$ C < 90) Skin Corr. 1B; H314 (90 $\leq$ 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	: If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.

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First-aid measures after skin contact	: Gently wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Immediately rinse with water for a prolonged period while holding the eyelids wide open. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Rinse mouth out with water. Do not induce vomiting. Get medical advice/attention.

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

Symptoms/effects after inhalation	: Burning sensation.
Symptoms/effects after eye contact	: redness, itching, tears.

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

Never give anything by mouth to an unconscious person.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Making extinguishing agents environment-friendly.
Unsuitable extinguishing media	: Strong water jet.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions	: Exercise caution when fighting any chemical fire.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Emergency procedures	: Do not get in eyes, on skin, or on clothing. Only qualified personnel equipped with suitable protective equipment may intervene.
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6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Absorb spilled material with sand or earth.
Other information	: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

See Heading 8. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	: Avoid any direct contact with the product.
Hygiene measures	: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Store in a well-ventilated place. Keep container tightly closed.
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Packaging materials : Keep only in the original container in a cool, well-ventilated place away from combustible materials.

Switzerland

Storage class (LK) : LK 6.1 - Toxic materials

7.3. Specific end use(s)

Laboratory chemicals. Reagent for water analysis.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

10 ml total hardness 2 (liquid)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	52 mg/m ³
	20 ppm
IOEL STEL	104 mg/m ³
	40 ppm
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	26 mg/m ³
	10 ppm
MAK (OEL STEL)	52 mg/m ³
	20 ppm
Bulgaria - Occupational Exposure Limits	
OEL TWA	52 mg/m ³
	20 ppm
OEL STEL	104 mg/m ³
	40 ppm
Croatia - Occupational Exposure Limits	
GVI (OEL TWA)	52 mg/m ³
	20 ppm
KGVI (OEL STEL)	104 mg/m ³
	40 ppm
Cyprus - Occupational Exposure Limits	
OEL TWA	52 mg/m ³
	20 ppm
OEL STEL	104 mg/m ³
	40 ppm
Czech Republic - Occupational Exposure Limits	
PEL (OEL TWA)	50 mg/m ³
NPK-P (OEL Ceiling)	100 mg/m ³

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10 ml total hardness 2 (liquid)	
Denmark - Occupational Exposure Limits	
OEL TWA	26 mg/m ³
	10 ppm
Estonia - Occupational Exposure Limits	
OEL TWA	52 mg/m ³
	10 ppm
OEL STEL	104 mg/m ³
	40 ppm
Finland - Occupational Exposure Limits	
HTP (OEL TWA)	50 mg/m ³
	20 ppm
HTP (OEL STEL)	100 mg/m ³
	40 ppm
France - Occupational Exposure Limits	
VME (OEL TWA)	52 mg/m ³
	20 ppm
VLE (OEL Ceiling/STEL)	104 mg/m ³
	40 ppm
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA)	26 mg/m ³
	10 ppm
Greece - Occupational Exposure Limits	
OEL TWA	125 mg/m ³
	50 ppm
OEL STEL	125 mg/m ³
	50 ppm
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	52 mg/m ³
CK (OEL STEL)	104 mg/m ³
Ireland - Occupational Exposure Limits	
OEL TWA	10 mg/m ³
	20 ppm
OEL STEL	30 mg/m ³
	40 ppm
Italy - Occupational Exposure Limits	
OEL TWA	52 mg/m ³
	20 ppm
OEL STEL	104 mg/m ³
	40 ppm

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10 ml total hardness 2 (liquid)	
Latvia - Occupational Exposure Limits	
OEL TWA	52 mg/m ³
	20 ppm
OEL STEL	37 mg/m ³
	15 ppm
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	25 mg/m ³
	10 ppm
TPRV (OEL STEL)	50 mg/m ³
	20 ppm
Luxembourg - Occupational Exposure Limits	
OEL TWA	25 mg/m ³
	10 ppm
OEL STEL	104 mg/m ³
	40 ppm
Malta - Occupational Exposure Limits	
OEL TWA	52 mg/m ³
	20 ppm
OEL STEL	104 mg/m ³
	40 ppm
Netherlands - Occupational Exposure Limits	
MAC-TGG (OEL TWA)	52 mg/m ³
	10 ppm
MAC-15 (OEL STEL)	104 mg/m ³
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	15 mg/m ³
NDSP (OEL Ceiling)	50 mg/m ³
Portugal - Occupational Exposure Limits	
OEL TWA	52 mg/m ³
	20 ppm
OEL STEL	104 mg/m ³
	40 ppm
Romania - Occupational Exposure Limits	
OEL TWA	52 mg/m ³
	20 ppm
OEL STEL	104 mg/m ³
	40 ppm
Slovakia - Occupational Exposure Limits	
NPHV (OEL TWA)	52 mg/m ³

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10 ml total hardness 2 (liquid)	
	20 ppm
NPHV (OEL STEL)	104 mg/m ³
Slovenia - Occupational Exposure Limits	
OEL TWA	52 mg/m ³
	20 ppm
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	52 mg/m ³
	20 ppm
VLA-EC (OEL STEL)	104 mg/m ³
	40 ppm
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	25 mg/m ³
	10 ppm
KTV (OEL STEL)	104 mg/m ³
	40 ppm
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	10 mg/m ³
	20 ppm
WEL STEL	104 mg/m ³
	40 ppm
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA)	52 mg/m ³
	20 ppm
Korttidsverdi (OEL STEL)	104 mg/m ³
	40 ppm
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA)	26 mg/m ³
	10 ppm
KZGW (OEL STEL)	52 mg/m ³
	20 ppm
Ethylene glycol (107-21-1)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Ethylene glycol
IOEL TWA	52 mg/m ³
	20 ppm
IOEL STEL	104 mg/m ³
	40 ppm
Remark	Skin
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC

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Ethylene glycol (107-21-1)	
France - Occupational Exposure Limits	
Local name	Ethylèneglycol
VME (OEL TWA)	52 mg/m ³ (vapeur)
	20 ppm (vapeur)
VLE (OEL Ceiling/STEL)	104 mg/m ³ (vapeur)
	40 ppm (vapeur)
Remark	Valeurs règlementaires indicatives; risque de pénétration percutanée
Regulatory reference	Arrêté du 30 juin 2004 modifié (réf.: INRS ED 984, 2016)
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	Ethandiol
AGW (OEL TWA)	26 mg/m ³
	10 ppm
Limitation of exposure peaks	2(I)
Remark	DFG,EU,H,Y,11
Regulatory reference	TRGS900
Greece - Occupational Exposure Limits	
Local name	Αιθυλενογλυκόλη (σπμολ)
OEL TWA	125 mg/m ³
	50 ppm
OEL STEL	125 mg/m ³
	50 ppm
Regulatory reference	Π.Δ. 90/1999
Italy - Occupational Exposure Limits	
Local name	Etilen glicol
OEL TWA	52 mg/m ³
	20 ppm
OEL STEL	104 mg/m ³
	40 ppm
Remark	pelle
Regulatory reference	Allegato XXXVIII del D.Lgs. 9 aprile 2008, n. 81 e s.m.i.
Portugal - Occupational Exposure Limits	
Local name	Etilenoglicol
OEL Ceiling	100 mg/m ³ H (Apenas aerossol)
	100 ppm H (Apenas aerossol)
Regulatory reference	Norma Portuguesa NP 1796:2014
Romania - Occupational Exposure Limits	
Local name	Etilenglicol/Etandiol
OEL TWA	52 mg/m ³
	20 ppm

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Ethylene glycol (107-21-1)	
OEL STEL	104 mg/m ³
	40 ppm
Regulatory reference	Hotărârea nr. 584/2018
Spain - Occupational Exposure Limits	
Local name	Etilenglicol
VLA-ED (OEL TWA)	52 mg/m ³
	20 ppm
VLA-EC (OEL STEL)	104 mg/m ³
	40 ppm
Remark	Vía dérmica (Indica que, en las exposiciones a esta sustancia, la aportación por la vía cutánea puede resultar significativa para el contenido corporal total si no se adoptan medidas para prevenir la absorción. En estas situaciones, es aconsejable la utilización del control biológico para poder cuantificar la cantidad global absorbida del contaminante. Para más información véase el Apartado 5 de este documento), VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo. Todos estos agentes químicos figuran al menos en una de las directivas de valores límite indicativos publicadas hasta ahora (ver Anexo C. Bibliografía). Los estados miembros disponen de un tiempo fijado en dichas directivas para su transposición a los valores límites de cada país miembro. Una vez adoptados, estos valores tienen la misma validez que el resto de los valores adoptados por el país).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2019. INSHT
United Kingdom - Occupational Exposure Limits	
Local name	Ethane-1,2-diol
WEL TWA (OEL TWA)	10 mg/m ³ particulate
	52 mg/m ³ vapour
	20 ppm vapour
WEL STEL	104 mg/m ³ vapour
	40 ppm vapour
Remark	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
Regulatory reference	EH40/2005 (Third edition, 2018). HSE
Acetic acid glacial (64-19-7)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Acetic acid
IOEL TWA	25 mg/m ³
	10 ppm
IOEL STEL	50 mg/m ³
	20 ppm
France - Occupational Exposure Limits	
Local name	Acide acétique
VLE (OEL Ceiling/STEL)	25 mg/m ³
	10 ppm
Remark	Valeurs recommandées/admises

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Acetic acid glacial (64-19-7)	
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	Essigsäure
AGW (OEL TWA)	25 mg/m ³
	10 ppm
Remark	DFG,EU,Y
Portugal - Occupational Exposure Limits	
Local name	Ácido acético
OEL TWA	10 ppm
OEL STEL	15 ppm
Spain - Occupational Exposure Limits	
Local name	Ácido acético
VLA-ED (OEL TWA)	25 mg/m ³
	10 ppm
VLA-EC (OEL STEL)	37 mg/m ³
	15 ppm
Remark	VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo. Todos estos agentes químicos figuran al menos en una de las directivas de valores límite indicativos publicadas hasta ahora (ver Anexo C. Bibliografía). Los estados miembros disponen de un tiempo fijado en dichas directivas para su transposición a los valores límites de cada país miembro. Una vez adoptados, estos valores tienen la misma validez que el resto de los valores adoptados por el país).

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure. EN 374.

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:

Wear security glasses which protect from splashes

Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

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Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves					EN ISO 374

Respiratory protection

Respiratory protection:

No respiratory protection needed under normal use conditions. In case of inadequate ventilation wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless.
Appearance	: Solution.
Odour	: Not available
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not available
Auto-ignition temperature	: 398 °C
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: Not available
Relative density	: Not available
Relative vapour density at 20 °C	: Not available
Particle characteristics	: Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

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10.6. Hazardous decomposition products

No additional information available

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
Acute toxicity (inhalation) : Not classified

10 ml total hardness 2 (liquid)	
LD50 oral rat	4700 mg/kg
LD50 oral	3310 mg/kg
LD50 dermal rat	10600 mg/kg
LD50 dermal rabbit	1060 mg/kg
LC50 inhalation rat (mg/l)	11,4 mg/l

Ethylene glycol (107-21-1)	
LD50 oral rat	7712 mg/kg bodyweight Animal: rat
LD50 dermal rat	> 3500 mg/kg
LC50 inhalation rat (mg/l)	> 2,5 mg/l/4h

Acetic acid glacial (64-19-7)	
LD50 oral rat	3310 mg/kg bodyweight Animal: rat
LD50 oral	4960 mg/kg bodyweight Animal: mouse
LC50 inhalation rat (Dust/Mist - mg/l/4h)	11,4 mg/l/4h

Skin corrosion/irritation : Not classified

Acetic acid glacial (64-19-7)	
pH	2,4

Serious eye damage/irritation : Causes serious eye irritation.

Acetic acid glacial (64-19-7)	
pH	2,4

Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Ethylene glycol (107-21-1)	
NOAEL (chronic, oral, animal/male, 2 years)	1500 mg/kg bodyweight Animal: mouse, Animal sex: male, Remarks on results: other:Effect type: carcinogenicity (migrated information)

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

Ethylene glycol (107-21-1)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Acetic acid glacial (64-19-7)	
NOAEL (oral, rat, 90 days)	290 mg/kg bodyweight Animal: rat, Animal sex: male

Aspiration hazard : Not classified

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Ethylene glycol (107-21-1)

Viscosity, kinematic	14,505 mm ² /s
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Acetic acid glacial (64-19-7)

Viscosity, kinematic	1,015 mm ² /s
----------------------	--------------------------

11.2. Information on other hazards

Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : Not applicable

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified
Hazardous to the aquatic environment, long-term (chronic) : Not classified

10 ml total hardness 2 (liquid)

LC50 - Fish [1]	14 – 18
EC50 - Daphnia [1]	46300 mg/l
EC50 72h - Algae [1]	6500 – 13000 mg/l

Ethylene glycol (107-21-1)

LC50 - Fish [1]	72860 mg/l Test organisms (species): Pimephales promelas
EC50 - Daphnia [1]	> 100 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 100 mg/l
EC50 96h - Algae [1]	3536 mg/l Test organisms (species): other:greenn algae
EC50 96h - Algae [2]	6500 – 13000 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
NOEC (chronic)	≥ 1000 mg/l Test organisms (species): Americamysis bahia (previous name: Mysidopsis bahia) Duration: '23 d'

Acetic acid glacial (64-19-7)

LC50 - Fish [1]	> 1000 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
LC50 - Fish [2]	> 300,82 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Daphnia [1]	> 1000 mg/l Test organisms (species): Daphnia magna
EC50 - Daphnia [2]	> 300,82 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 1000 mg/l Test organisms (species): Skeletonema costatum
EC50 72h - Algae [2]	> 300,82 mg/l Test organisms (species): Skeletonema costatum

12.2. Persistence and degradability

10 ml total hardness 2 (liquid)

Persistence and degradability	Rapidly degradable
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10 ml total hardness 2 (liquid)

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Ethylene glycol (107-21-1)

Persistence and degradability	Rapidly degradable
Biodegradation	90 %

Acetic acid glacial (64-19-7)

Persistence and degradability	Readily biodegradable.
Biodegradation	94 %

12.3. Bioaccumulative potential

Ethylene glycol (107-21-1)

Partition coefficient n-octanol/water (Log Pow)	-1,36
Bioaccumulative potential	Low.

Acetic acid glacial (64-19-7)

BCF - Fish [1]	3,16
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12.4. Mobility in soil

Ethylene glycol (107-21-1)

Surface tension	4,989 N/m
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12.5. Results of PBT and vPvB assessment

10 ml total hardness 2 (liquid)

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

Component

PBT: not relevant – no registration required	Ethylene glycol (107-21-1)
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12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : Not applicable.

12.7. Other adverse effects

Other adverse effects : Do not discharge into drains or rivers.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Must follow special treatment according to local regulation.

SECTION 14: Transport information

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

14.1. UN number or ID number

UN-No. (ADR)	: Not applicable
UN-No. (IMDG)	: Not applicable
UN-No. (IATA)	: Not applicable
UN-No. (ADN)	: Not applicable
UN-No. (RID)	: Not applicable

10 ml total hardness 2 (liquid)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: Not applicable
Proper Shipping Name (IMDG)	: Not applicable
Proper Shipping Name (IATA)	: Not applicable
Proper Shipping Name (ADN)	: Not applicable
Proper Shipping Name (RID)	: Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: Not applicable
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IMDG

Transport hazard class(es) (IMDG)	: Not applicable
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IATA

Transport hazard class(es) (IATA)	: Not applicable
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ADN

Transport hazard class(es) (ADN)	: Not applicable
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RID

Transport hazard class(es) (RID)	: Not applicable
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14.4. Packing group

Packing group (ADR)	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable
Packing group (ADN)	: Not applicable
Packing group (RID)	: Not applicable

14.5. Environmental hazards

Other information	: No supplementary information available
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14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

10 ml total hardness 2 (liquid)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

Contains no REACH substances with Annex XVII restrictions

REACH Annex XIV (Authorisation List)

Contains no REACH Annex XIV substances

REACH Candidate List (SVHC)

Contains no substance on the REACH candidate list

PIC Regulation (Prior Informed Consent)

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

POP Regulation (Persistent Organic Pollutants)

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Ozone Regulation (2024/590)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 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 subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Drug Precursors Regulation (273/2004)

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

National regulations

France

Occupational diseases	
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 dimethylacetamide; acetonitrile and propionitrile; pyridine; dimethylsulfone and dimethylsulfoxide

Germany

VOC ordinance (ChemVOCFarbV)

:

Water hazard class (WGK)

: WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1).

Hazardous Incident Ordinance (12. BImSchV)

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

Netherlands

SZW-lijst van kankerverwekkende stoffen

: None of the components are listed

SZW-lijst van mutagene stoffen

: None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding

: None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid

: None of the components are listed

10 ml total hardness 2 (liquid)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

Denmark

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

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H373	May cause damage to organs through prolonged or repeated exposure.

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.