Safety Data Sheet

Conforms to Regulation (EC) No. 1907/2006 (REACH), Article 31, Annex II, as amended by Commission Regulation (EU) 2020/878

AQUA-PUR RETARD

Date of first edition: 3/28/2022

Safety Data Sheet dated 10/03/2026

version 2

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

1.1. Product identifier

Mixture identification:

Trade name: AQUA-PUR RETARD

Trade code: S100B0122 11

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

Recommended use: additive

Uses advised against: All uses other than recommended ones

1.3. Details of the supplier of the safety data sheet

Company: KERAKOLL S.p.A.

Via dell'Artigianato, 9

41049 Sassuolo (MODENA) - ITALY

Tel.+39 0536 816511 Fax. +39 0536816581

safety@kerakoll.com

1.4. Emergency telephone number

European emergency phone number 112

Ireland Emergency medical information: (seven days) contact National Poisons Information Centre, Beaumont Hospital, Dublin 9 DOV2NO, Ireland.

Members of the public Number (8 am-10 pm): +353 (0)1 809 2166

Healthcare professional telephone Number (24hrs): +353 (0)1 809 2566

Malta In case of emergency call: +356 2395 2000 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) n. 1272/2008 (CLP)

Eye Irrit. 2 Causes serious eye irritation.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Regulation (EC) No 1272/2008 (CLP):

Hazard pictograms and Signal Word

Warning

Hazard statements

H319 Causes serious eye irritation.

Precautionary statements

P102 Keep out of reach of children.

P280 Wear protective gloves and eye protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P501 Dispose of contents/container in accordance with applicable regulations.

Special provisions according to Annex XVII of REACH and subsequent amendments:

None.

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration >= 0.1%

Other Hazards: No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Mixture identification: AQUA-PUR RETARD

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Numb.	Classification	Registration Number
≥20-<50 %	2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether	CAS:112-34-5 EC:203-961-6 Index:603-096-00-8	Eye Irrit. 2, H319	01-2119475104-44
≥1-<3 %	(2-methoxymethylethoxy)propanol	CAS:34590-94-8 EC:252-104-2	Substance with a Union workplace exposure limit.	01-2119450011-60

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediatley and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an opthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and label hazardous.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

Eye irritation

Eye damages

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO_2).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non emergency personnel:

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

For emergency responders:

Wear personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contamined clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

7.2. Conditions for safe storage, including any incompatibilities

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

Recommendation(s)

None in particular

Industrial sector specific solutions:

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Community Occupational Exposure Limits (OEL)

	OEL Type	Country	Occupational Exposure Limit
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether CAS: 112-34-5	ACGIH		Long Term: 10 ppm (8h) IFV - Hematologic, liver and kidney eff
	NATIONAL	AUSTRIA	Long Term: 67.5 mg/m3 - 10 ppm; Short Term: 101.2 mg/m3 - 15 ppm 15(Miw), 4x, MAK Source: GKV, BGBl. II Nr. 156/2021
	NATIONAL	BULGARIA	Long Term: 67.5 mg/m3 - 10 ppm; Short Term: 101.2 mg/m3 - 15 ppm Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г.
	NATIONAL	CZECHIA	Long Term: 70 mg/m3; Short Term: Ceiling - 100 mg/m3 I Source: Nařízení vlády č. 361-2007 Sb
	NATIONAL	DENMARK	Long Term: 68 mg/m3 - 10 ppm E Source: BEK nr 2203 af 29/11/2021
	NATIONAL	FINLAND	Long Term: 68 mg/m3 - 10 ppm Source: HTP-ARVOT 2020
	NATIONAL	FRANCE	Long Term: 67.5 mg/m3 - 10 ppm; Short Term: 101.2 mg/m3 - 15 ppm Source: INRS outil65, arrêté du 30-06-2004 modifié
	NATIONAL	HUNGARY	Long Term: 67.5 mg/m3; Short Term: 101.2 mg/m3 EU2, T

		Source: 5/2020. (II. 6.) ITM rendelet
NATIONAL	LITHUANIA	Long Term: 100 mg/m3 - 15 ppm; Short Term: 200 mg/m3 - 30 ppm Source: 2011 m. rugsėjo 1 d. Nr. V-824/A1-389
NATIONAL	NETHERLANDS	Long Term: 50 mg/m3; Short Term: 100 mg/m3 H Source: Arbeidsomstandighedenregeling - Lijst A
NATIONAL	NORWAY	Long Term: 68 mg/m3 - 10 ppm E Source: FOR-2021-06-28-2248
NATIONAL	POLAND	Long Term: 67 mg/m3; Short Term: 100 mg/m3 Source: Dz.U. 2018 poz. 1286
NATIONAL	SLOVAKIA	Long Term: 67.5 mg/m3 - 10 ppm; Short Term: 101.2 mg/m3 - 15 ppm Source: 355 NARIADENIE VLÁDY z 10. mája 2006
NATIONAL	SWEDEN	Long Term: 68 mg/m3 - 10 ppm; Short Term: 101 mg/m3 - 15 ppm Source: AFS 2021:3
SUVA	SWITZERLAND	Long Term: 67 mg/m3 - 10 ppm; Short Term: 101 mg/m3 - 15 ppm SSC, Rein Sang Foie / Niere Blut Leber, La substance peut être présente sous forme de vapeur et d'aérosol en même temps / Der Stoff kann gleichzeitig als Dampf und Aerosol vorliegen Source: suva.ch/valeurs-limites
NATIONAL	BELGIUM	Long Term: 67.5 mg/m3 - 10 ppm; Short Term: 101.2 mg/m3 - 15 ppm Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
NATIONAL	CROATIA	Long Term: 67.5 mg/m3 - 10 ppm; Short Term: 101.2 mg/m3 - 15 ppm Source: 2006/15/EZ
NATIONAL	CYPRUS	Long Term: 67.5 mg/m3 - 10 ppm; Short Term: 101.2 mg/m3 - 15 ppm Source: Οι περί Ασφάλειας και Υγείας στην Εργασία (Χημικοί Παράγοντες) Κανονισμοί του 2001 έως 2021
NATIONAL	GERMANY	Long Term: 67 mg/m3 - 10 ppm EU, DFG, Y, 11, 1, 5 (I) Source: TRGS 900
NATIONAL	GREECE	Long Term: 67.5 mg/m3 - 10 ppm; Short Term: 101.2 mg/m3 - 15 ppm Source: ΦΕΚ 202/Α` 23.8.2007
NATIONAL	IRELAND	Long Term: 67.5 mg/m3 - 10 ppm; Short Term: 101.2 mg/m3 - 12 ppm IOELV Source: 2021 Code of Practice
NATIONAL	ITALY	Long Term: 67.5 mg/m3 - 10 ppm; Short Term: 101.2 mg/m3 - 15 ppm Source: D.lgs. 81/2008, Allegato XXXVIII
NATIONAL	LATVIA	Long Term: 67.5 mg/m3 - 10 ppm; Short Term: 101.2 mg/m3 - 15 ppm Source: KN325P1
NATIONAL	LUXEMBOURG	Long Term: 67.5 mg/m3 - 10 ppm; Short Term: 101.2 mg/m3 - 15 ppm Source: Mémorial A n.226 du 22 mars 2021
NATIONAL	MALTA	Long Term: 67.5 mg/m3 - 10 ppm; Short Term: 101.2 mg/m3 - 15 ppm Source: S.L.424.24
NATIONAL	PORTUGAL	Long Term: 67.5 mg/m3 - 10 ppm; Short Term: 101.2 mg/m3 - 15 ppm Source: Decreto-Lei n.º 1/2021
NATIONAL	ROMANIA	Long Term: 67.5 mg/m3 - 10 ppm; Short Term: 101.2 mg/m3 - 15 ppm Dir. 2006/15 Source: Republicarea 1 - nr. 743 din 29 iulie 2021
NATIONAL	SLOVENIA	Long Term: 67.5 mg/m3 - 10 ppm; Short Term: 101.2 mg/m3 - 15 ppm Y, EU2 Source: UL št. 72, 11. 5. 2021
NATIONAL	SPAIN	Long Term: 67.5 mg/m3 - 10 ppm; Short Term: 101.2 mg/m3 - 15 ppm VLI, r Source: LEP 2022
	EU	Long Term: 67.5 mg/m3 - 10 ppm (8h); Short Term: 101.2 mg/m3 - 15 ppm
(2-methoxymethylethoxy) propanol	ACGIH	Long Term: 50 ppm (8h) Liver & CNS eff

NATIONAL	BELGIUM	Long Term: 308 mg/m3 - 50 ppm D Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
NATIONAL	CROATIA	Long Term: 308 mg/m3 - 50 ppm koža Source: 2000/39/EZ
NATIONAL	CYPRUS	Long Term: 308 mg/m3 - 50 ppm δέρμα Source: Οι περί Ασφάλειας και Υγείας στην Εργασία (Χημικοί Παράγοντες) Κανονισμοί του 2001 έως 2021
NATIONAL	GERMANY	Long Term: 310 mg/m3 - 50 ppm DFG, EU, 11, 1(I) Source: TRGS 900
NATIONAL	IRELAND	Long Term: 308 mg/m3 - 50 ppm Sk, IOELV Source: 2021 Code of Practice
NATIONAL	ITALY	Long Term: 308 mg/m3 - 50 ppm Cute Source: D.lgs. 81/2008, Allegato XXXVIII
NATIONAL	LATVIA	Long Term: 308 mg/m3 - 50 ppm Āda Source: KN325P1
NATIONAL	LUXEMBOURG	Long Term: 308 mg/m3 - 50 ppm Peau Source: Mémorial A n.226 du 22 mars 2021
NATIONAL	MALTA	Long Term: 308 mg/m3 - 50 ppm skin Source: S.L.424.24
NATIONAL	PORTUGAL	Long Term: 308 mg/m3 - 50 ppm Cutânea Source: Decreto-Lei n.º 1/2021
NATIONAL	ROMANIA	Long Term: 308 mg/m3 - 50 ppm P, Dir. 2000/39 Source: Republicarea 1 - nr. 743 din 29 iulie 2021
NATIONAL	SLOVENIA	Long Term: 308 mg/m3 - 50 ppm; Short Term: 308 mg/m3 - 50 ppm K, EU1 Source: UL št. 72, 11. 5. 2021
NATIONAL	SPAIN	Long Term: 308 mg/m3 - 50 ppm vía dérmica, VLI Source: LEP 2022
NATIONAL	AUSTRIA	Long Term: 307 mg/m3 - 50 ppm; Short Term: Ceiling - 614 mg/m3 - 100 ppm 5(Mow), 8x, MAK, H Source: GKV, BGBl. II Nr. 156/2021
NATIONAL	BULGARIA	Long Term: 308 mg/m3 - 50 ppm Кожа Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г.
NATIONAL	CZECHIA	Long Term: 270 mg/m3; Short Term: Ceiling - 550 mg/m3 D Source: Nařízení vlády č. 361-2007 Sb
NATIONAL	DENMARK	Long Term: 309 mg/m3 - 50 ppm EH Source: BEK nr 2203 af 29/11/2021
NATIONAL	ESTONIA	Long Term: 308 mg/m3 - 50 ppm A Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
NATIONAL	FINLAND	Long Term: 310 mg/m3 - 50 ppm iho Source: HTP-ARVOT 2020
NATIONAL	FRANCE	Long Term: 308 mg/m3 - 50 ppm

			Risque de pénétration percutanée Source: INRS outil65, article R. 4412-149 du Code du travail
	NATIONAL	GREECE	Long Term: 600 mg/m3 - 100 ppm; Short Term: 900 mg/m3 - 150 ppm Δ Source: ΦΕΚ 94/Α` 13.5.1999
	NATIONAL	HUNGARY	Long Term: 308 mg/m3 EU1, R Source: 5/2020. (II. 6.) ITM rendelet
	NATIONAL	LITHUANIA	Long Term: 300 mg/m3 - 50 ppm; Short Term: 450 mg/m3 - 75 ppm O Source: 2011 m. rugsėjo 1 d. Nr. V-824/A1-389
	NATIONAL	NETHERLANDS	Long Term: 300 mg/m3 Source: Arbeidsomstandighedenregeling - Lijst A
	NATIONAL	NORWAY	Long Term: 300 mg/m3 - 50 ppm H E Source: FOR-2021-06-28-2248
	NATIONAL	POLAND	Long Term: 240 mg/m3; Short Term: 480 mg/m3 skóra Source: Dz.U. 2018 poz. 1286
	NATIONAL	SLOVAKIA	Long Term: 308 mg/m3 - 50 ppm K Source: 355 NARIADENIE VLÁDY z 10. mája 2006
	NATIONAL	SWEDEN	Long Term: 300 mg/m3 - 50 ppm; Short Term: 450 mg/m3 - 75 ppm H, V Source: AFS 2021:3
	SUVA	SWITZERLAND	Long Term: 300 mg/m3 - 50 ppm; Short Term: 300 mg/m3 - 50 ppm VR Yeux Nez / AW Auge Nase, NIOSH, La substance peut être présente sous forme de vapeur et d'aérosol en même temps / Der Stoff kann gleichzeitig als Dampf und Aerosol vorliegen Source: suva.ch/valeurs-limites
	WEL-EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 308 mg/m3 - 50 ppm Sk Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020)
	EU		Long Term: 308 mg/m3 - 50 ppm (8h) Skin
octamethylcyclotetrasiloxane CAS: 556-67-2	NATIONAL	AUSTRIA	f Source: BGBl. II Nr. 156/2021

Predicted No Effect Concentration (PNEC) values

2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether CAS: 112-34-5	Exposure Route: Fresh Water; PNEC Limit: 1.1 mg/l
	Exposure Route: Intermittent releases (fresh water); PNEC Limit: 11 mg/l
	Exposure Route: Marine water; PNEC Limit: 110 µg/l
	Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 200 mg/l
	Exposure Route: Freshwater sediments; PNEC Limit: 4.4 mg/kg
	Exposure Route: Marine water sediments; PNEC Limit: 440 µg/kg
	Exposure Route: Soil; PNEC Limit: 320 µg/kg
	Exposure Route: Secondary poisoning; PNEC Limit: 56 mg/kg

Derived No Effect Level (DNEL) values

2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether CAS: 112-34-5	Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects Worker Professional: 67.5 mg/m³; Consumer: 40.5 mg/m³
	Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects

Worker Professional: 67.5 mg/m³; Consumer: 40.5 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Professional: 101.2 mg/m³; Consumer: 60.7 mg/m³

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 83 mg/kg; Consumer: 50 mg/kg

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 5 mg/kg

8.2. Exposure controls

Eye protection:

Eye glasses with side protection.(EN166)

Protection for skin:

Chemical protection clothing. Safety shoes.

Protection for hands:

Protection for hands:

Suitable materials for safety gloves; EN 374:

Nitrile rubber - NBR: thickness ≥0,35mm; breakthrough time ≥480min.

Respiratory protection:

N.A.

Thermal Hazards:

Not expected if used as intended

Environmental exposure controls:

Prevent the product from entering sewers or surface and underground water.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid

Colour: Colourless

Odour: Characteristic

Odour threshold: N.A.

pH: N.A. (Not applicable, non-aqueous mixture)

Kinematic viscosity: N.A. (Not determined, as it is not required for CLP classification)

Melting point/freezing point: N.A.

Boiling point or initial boiling point and boiling range: > 100 °C (212 °F)

Flash point: 105 °C (221 °F)

Lower and upper explosion limit: N.A. (Not applicable as the mixture is not flammable)

Relative vapour density: N.A. (Some data is not known)

Vapour pressure: 23.00 hPa

Density and/or relative density: 0.99 g/cm3

Solubility in water: Soluble

Solubility in oil: N.A. (Not determined, as it is not required for CLP classification)

Partition coefficient n-octanol/water (log value): N.A. (Not applicable to mixtures)

Auto-ignition temperature: N.A. (Not applicable as the mixture is not flammable)

Decomposition temperature: N.A. (Not applicable, as the mixture is not self-reactive)

Flammability: ; Not applicable as the mixture is not flammable

Volatile Organic compounds - VOCs = 21.44 % ; 212.47 g/l

Particle characteristics:

Particle size: N.A.

9.2. Other information

No other relevant information

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Data not available.

10.3. Possibility of hazardous reactions

None.

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

None in particular.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

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

Toxicological Information of the Preparation

a) acute toxicity	Not classified
	Based on available data, the classification criteria are not met
b) skin corrosion/irritation	Not classified
	Based on available data, the classification criteria are not met
c) serious eye damage/irritation	The product is classified: Eye Irrit. 2(H319)
d) respiratory or skin sensitisation	Not classified
	Based on available data, the classification criteria are not met
e) germ cell mutagenicity	Not classified
	Based on available data, the classification criteria are not met
f) carcinogenicity	Not classified
	Based on available data, the classification criteria are not met
g) reproductive toxicity	Not classified
	Based on available data, the classification criteria are not met
h) STOT-single exposure	Not classified
	Based on available data, the classification criteria are not met
i) STOT-repeated exposure	Not classified
	Based on available data, the classification criteria are not met
j) aspiration hazard	Not classified
	Based on available data, the classification criteria are not met

Toxicological information on main components of the mixture:

2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether	a) acute toxicity	LD50 Oral Mouse = 2410 mg/kg	LD50 2 410 - 5 530 mg/k
		LD50 Skin Rabbit = 2764 mg/kg	LD50 2 410 - 5 530 mg/k
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative 1h	
	c) serious eye damage/irritation	Eye Irritant Rabbit Yes	
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Negative	
	f) carcinogenicity	Genotoxicity Negative	Mouse oral route
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rodent = 720 mg/kg	

11.2. Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration >= 0.1%

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

List of Eco-Toxicological properties of the product

Not classified for environmental hazards.

No data available for the product

List of Eco-Toxicological properties of the components

Component	Ident. Numb.	Ecotox Data

2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether	CAS: 112-34-5 - EINECS: 203-961-6 - INDEX: 603-096-00-8	a) Aquatic acute toxicity : LC50 Fish Leopomis macrochirus = 1.3 mg/L 96h b) Aquatic chronic toxicity : LC10 Fish freshwater fish = 396 mg/L QSAR model a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna = 1101 mg/L 48h OECD 202 b) Aquatic chronic toxicity : LC10 Daphnia freshwater invertebrates = 112 mg/L protocol: QSAR - 14days a) Aquatic acute toxicity : EC50 Algae Desmodesmus subspicatus = 100 mg/L 96h OECD201 c) Bacteria toxicity : EC10 Sludge Activated sludge = 1995 mg/L

12.2. Persistence and degradability

Component	Persitence/Degradability:	Test	Value	Notes:
2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether	Readily biodegradable	Biochemical oxigen demand	91.700	%

12.3. Bioaccumulative potential

N.A.

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

No PBT or vPvB substances present in concentration >= 0.1%

12.6. Endocrine disrupting properties

No endocrine disruptor substances present in concentration >= 0.1%

12.7. Other adverse effects

N.A.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover if possible. In so doing, comply with the local and national regulations currently in force. Disposal through discharge into wastewater is not permitted

The product disposed of as such, pursuant to Regulation (EU) 1357/2014, must be classified as hazardous waste

A waste code according to the European List of Wastes (LoW) cannot be specified, due to dependence on the usage. Contact an authorized waste disposal service.

Properties of waste which render it hazardous (Annex III, Directive 2008/98/EC):

N.A.

SECTION 14: Transport information

Not classified as dangerous in the meaning of transport regulations.

14.1. UN number or ID number

N/A

14.2. UN proper shipping name

ADR-Shipping Name: N/A

IATA-Shipping Name: N/A

IMDG-Shipping Name: N/A

14.3. Transport hazard class(es)

ADR-Class: N/A

IATA-Class: N/A

IMDG-Class: N/A

14.4. Packing group

ADR-Packing Group: N/A

IATA-Packing group: N/A

IMDG-Packing group: N/A

14.5. Environmental hazards

Marine pollutant: No

Environmental Pollutant: No

IMDG-EMS: N/A

14.6. Special precautions for user

Road and Rail (ADR-RID):

ADR-Label: N/A

ADR - Hazard identification number: N/A

ADR-Special Provisions: N/A

ADR-Transport category (Tunnel restriction code): N/A

ADR Limited Quantities: N/A

ADR Excepted Quantities: N/A

Air (IATA):

IATA-Passenger Aircraft: N/A

IATA-Cargo Aircraft: N/A

IATA-Label: N/A

IATA-Subsidiary hazards: N/A

IATA-Erg: N/A

IATA-Special Provisions: N/A

Sea (IMDG):

IMDG-Stowage and handling: N/A

IMDG-Segregation: N/A

IMDG-Subsidiary hazards: N/A

IMDG-Special Provisions: N/A

14.7. Maritime transport in bulk according to IMO instruments

N.A.

SECTION 15: Regulatory information

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

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Regulation (EC) n. 1907/2006 (REACH)

Regulation (EC) n. 1272/2008 (CLP)

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Regulation (EU) n. 487/2013 (ATP 4 CLP)

Regulation (EU) n. 944/2013 (ATP 5 CLP)

Regulation (EU) n. 605/2014 (ATP 6 CLP)

Regulation (EU) n. 2015/1221 (ATP 7 CLP)

Regulation (EU) n. 2016/918 (ATP 8 CLP)

Regulation (EU) n. 2016/1179 (ATP 9 CLP)

Regulation (EU) n. 2017/776 (ATP 10 CLP)

Regulation (EU) n. 2018/669 (ATP 11 CLP)

Regulation (EU) n. 2018/1480 (ATP 13 CLP)

Regulation (EU) n. 2019/521 (ATP 12 CLP)

Regulation (EU) n. 2020/217 (ATP 14 CLP)

Regulation (EU) n. 2020/1182 (ATP 15 CLP)

Regulation (EU) n. 2021/643 (ATP 16 CLP)

Regulation (EU) n. 2021/849 (ATP 17 CLP)

Regulation (EU) n. 2022/692 (ATP 18 CLP)

Regulation (EU) n. 2023/707

Regulation (EU) n. 2023/1434 (ATP 19 CLP)

Regulation (EU) n. 2023/1435 (ATP 20 CLP)

Regulation (EU) n. 2024/197 (ATP 21 CLP)

Regulation (EU) n. 2020/878

Regulation (EC) nr 648/2004 (Detergents).

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product: 3

Restrictions related to the substances contained: 40, 55, 70, 75

Provisions related to directive EU 2012/18 (Seveso III):

None

Explosives precursors – Regulation 2019/1148

No substances listed

Regulation (EU) No 649/2012 (PIC regulation)

No substances listed

German Water Hazard Class.

NWG: Not hazardous for water

German Lagerklasse according to TRGS 510:

LGK 10

SVHC Substances:

No SVHC substances present in concentration >= 0.1%

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

Substances for which a Chemical Safety Assessment has been carried out:

2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether

SECTION 16: Other information

Code	Description
H319	Causes serious eye irritation.

Code	Hazard class and hazard category	Description
3.3/2	Eye Irrit. 2	Eye irritation, Category 2

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

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Eye Irrit. 2, H319	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BCF: Biological Concentration Factor

BEI: Biological Exposure Index

BOD: Biochemical Oxygen Demand

CAS: Chemical Abstracts Service (division of the American Chemical Society).

CAV: Poison Center

CE: European Community

CLP: Classification, Labeling, Packaging.

CMR: Carcinogenic, Mutagenic and Reprotoxic

COD: Chemical Oxygen Demand

COV: Volatile Organic Compound

CSA: Chemical Safety Assessment

CSR: Chemical Safety Report

DMEL: Derived Minimal Effect Level

DNEL: Derived No Effect Level.

DPD: Dangerous Preparations Directive

DSD: Dangerous Substances Directive

EC50: Half Maximal Effective Concentration

ECHA: European Chemicals Agency

EINECS: European Inventory of Existing Commercial Chemical Substances.

ES: Exposure Scenario

GefStoffVO: Ordinance on Hazardous Substances, Germany.
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association.
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
IC50: half maximal inhibitory concentration
ICAO: International Civil Aviation Organization.
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG: International Maritime Code for Dangerous Goods.
INCI: International Nomenclature of Cosmetic Ingredients.
IRCCS: Scientific Institute for Research, Hospitalization and Health Care
KAFH: Keep Away From Heat
KSt: Explosion coefficient.
LC50: Lethal concentration, for 50 percent of test population.
LD50: Lethal dose, for 50 percent of test population.
LDLo: Leathal Dose Low
N.A.: Not Applicable
N/A: Not Applicable
N/D: Not defined/ Not available
NA: Not available
NIOSH: National Institute for Occupational Safety and Health
NOAEL: No Observed Adverse Effect Level
OSHA: Occupational Safety and Health Administration
PBT: Persistent, Bioaccumulative and Toxic
PGK: Packaging Instruction
PNEC: Predicted No Effect Concentration.
PSG: Passengers
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
TLV: Threshold Limiting Value.
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
vPvB: Very Persistent, Very Bioaccumulative.
WGK: German Water Hazard Class.

Paragraphs modified from the previous revision:

- SECTION 1: Identification of the substance/mixture and of the company/undertaking
- SECTION 2: Hazards identification
- SECTION 3: Composition/information on ingredients
- SECTION 7: Handling and storage
- SECTION 8: Exposure controls/personal protection
- SECTION 9: Physical and chemical properties
- SECTION 11: Toxicological information
- SECTION 12: Ecological information
- SECTION 13: Disposal considerations
- SECTION 14: Transport information
- SECTION 15: Regulatory information
- SECTION 16: Other information

Exposure Scenario
2-(2-butoxyethoxy)ethanol

Exposure Scenario, 13/07/2021

Substance identity	
	2-(2-butoxyethoxy)ethanol
CAS No.	112-34-5
INDEX No.	603-096-00-8
EINECS No.	203-961-6
Registration number	01-2119475104-44

Table of contents

1. ES 1 Widespread use by professional workers; Coatings and paints, thinners, paint removers (PC9a)

1.1 TITLE SECTION

Exposure Scenario name	Professional application of coatings and inks
Date - Version	23/03/2021 - 1.0
Life Cycle Stage	Widespread use by professional workers
Main user group	Professional uses
Sector(s) of use	Professional uses (SU22)
Product Categories	Coatings and paints, thinners, paint removers (PC9a)

Environment Contributing Scenario

CS1 Low environmental release	ERC8c - ERC8f

Worker Contributing Scenario

CS2 Mixing operations - Surfaces - Wiping - Preparation of material for application - General measures (eye irritants)	PROC10 - PROC9 - PROC13

1.2 Conditions of use affecting exposure

1.2. CS1: Environment Contributing Scenario: Low environmental release (ERC8c, ERC8f)

Environmental release categories	Widespread use leading to inclusion into/onto article (indoor) - Widespread use leading to inclusion into/onto article (outdoor) (ERC8c, ERC8f)

Product (article) characteristics

Physical form of product:

Solid, low dustiness

Vapour pressure:

Vapour pressure < 0.01 Pa at standard temperature and pressure = 0.00022 Pa

Concentration of substance in product:

Covers percentage substance in the product up to 100 %.

Other conditions affecting environmental exposure

Outdoor use

Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.

Additional Good Practice Advice:

Ensure that direction of application is only horizontal or downward. Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Additional conditions human health

Application of solvent-borne or water-borne products

1.2. CS2: Worker Contributing Scenario: Mixing operations - Surfaces - Wiping - Preparation of material for application - General measures (eye irritants) (PROC10, PROC9, PROC13)

Process Categories	Roller application or brushing - Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - Treatment of articles by dipping and pouring (PROC10, PROC9, PROC13)

Product (article) characteristics

Physical form of product:

Solid, high dustiness

Solid, low dustiness

Vapour pressure:

Vapour pressure < 0.01 Pa at standard temperature and pressure = 0.00022 Pa

Concentration of substance in product:

Covers percentage substance in the product up to 100 %.

Amount used, frequency and duration of use/exposure

Duration:

Covers daily exposures up to 8 hours <= 8 h

Frequency:

Use frequency = 230 days per year

Technical and organisational conditions and measures

Technical and organisational measures

Ensure operatives are trained to minimise exposures.
Avoid direct eye contact with product, also via contamination on hands.
Ensure that direct skin contact is avoided.
Provide a basic standard of general ventilation (1 to 3 air changes per hour).
For further specification, refer to section 8 of the SDS.

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection

Use suitable eye protection.
Provide employee with skin care programmes.

Other conditions affecting worker exposure

Covers indoor and outdoor use
Professional use
Temperature: Covers use at ambient temperatures.

Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.

Additional Good Practice Advice:

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

1.3 Exposure estimation and reference to its source

1.3. CS1: Environment Contributing Scenario: Low environmental release (ERC8c, ERC8f)

Additional information on exposure estimation:

As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed.

1.3. CS2: Worker Contributing Scenario: Mixing operations - Surfaces - Wiping - Preparation of material for application - General measures (eye irritants) (PROC10, PROC9, PROC13)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
combined routes, systemic, long-term	N/A	ECETOC TRA worker v3	< 1

1.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance to check compliance with the exposure scenario:

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.