SAFETY DATA SHEET

AQUAFINE 8336-20 - All variants

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

1.1 Product identifier

Product name : AQUAFINE 8336-20 - All variants

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

Product use : Paint.

1.3 Details of the supplier of the safety data sheet

Teknos Group Oy, Takkatie 3, FI-00370 HELSINKI, FINLAND. Tel. +358 9 506 091.

e-mail address of person responsible for this SDS : Prod-safe@teknos.com

National contact

Teknos Group Oy, Takkatie 3, FI-00370 HELSINKI, FINLAND. Tel. +358 9 506 091.

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : In an emergency, call 112

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

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

Skin Sens. 1, H317
Aquatic Chronic 3, H412

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : H317 - May cause an allergic skin reaction.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention : P280 - Wear protective gloves.
P273 - Avoid release to the environment.
P261 - Avoid breathing vapour.

Response : P302 + P352 - IF ON SKIN: Wash with plenty of water.
P362 + P364 - Take off contaminated clothing and wash it before reuse.

Storage : Not applicable.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

SECTION 2: Hazards identification

Hazardous ingredients : Contains: Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate; 2,4,7,9-tetramethyl-5-decyne-4,7-diol; 1,2-benzisothiazol-3(2H)-one and reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)

Supplemental label elements : Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles :

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
titanium dioxide	REACH #: 01-2119489379-17 EC: 236-675-5 CAS: 13463-67-7	≥10 - ≤25	Carc. 2, H351 (inhalation)	-	[1] [*]
2-(2-butoxyethoxy)ethanol	REACH #: 01-2119475104-44 EC: 203-961-6 CAS: 112-34-5 Index: 603-096-00-8	≤3	Eye Irrit. 2, H319	-	[1] [2]
Dipropyleneglycolmethylether	REACH #: 01-2119450011-60 EC: 252-104-2 CAS: 34590-94-8	≤3	Not classified.	-	[2]
Solvent naphtha (petroleum), light aromatic	REACH #: 01-2119455851-35 EC: 265-199-0 CAS: 64742-95-6 Index: 649-356-00-4	≤3	Flam. Liq. 3, H226 STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066	-	[1]
3-Butoxypropan-2-ol	REACH #: 01-2119475527-28 EC: 225-878-4 CAS: 5131-66-8 Index: 603-052-00-8	≤3	Skin Irrit. 2, H315 Eye Irrit. 2, H319	-	[1]
2-Butoxyethanol	REACH #: 01-2119475108-36 EC: 203-905-0 CAS: 111-76-2 Index: 603-014-00-0	<1	Acute Tox. 4, H302 Acute Tox. 3, H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319	ATE [Oral] = 1200 mg/kg ATE [Inhalation (vapours)] = 3 mg/l	[1] [2]

SECTION 3: Composition/information on ingredients

2-Propenoic acid, 2-methyl-, polymer with ethyl 2-propenoate	CAS: 1431957-88-8	≤1	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Acute] = 1 M [Chronic] = 1	[1]
Reaction mass of Bis (1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	REACH #: 01-2119491304-40 EC: 915-687-0 CAS: 1065336-91-5	≤0.3	Skin Sens. 1A, H317 Repr. 2, H361f Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Acute] = 1 M [Chronic] = 1	[1]
2,4,7,9-tetramethyl-5-decyne-4,7-diol	REACH #: 01-2119954390-39 EC: 204-809-1 CAS: 126-86-3	≤0.3	Eye Dam. 1, H318 Skin Sens. 1B, H317 Aquatic Chronic 3, H412	-	[1]
1,2-benzisothiazol-3(2H)-one	EC: 220-120-9 CAS: 2634-33-5 Index: 613-088-00-6	≤0.01	Acute Tox. 4, H302 Acute Tox. 2, H330 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	ATE [Oral] = 450 mg/kg ATE [Inhalation (dusts and mists)] = 0.21 mg/l Skin Sens. 1, H317: C ≥ 0.036% M [Acute] = 1 M [Chronic] = 1	[1]
pyrithione zinc	REACH #: 01-2119511196-46 EC: 236-671-3 CAS: 13463-41-7 Index: 613-333-00-7	<0.01	Acute Tox. 3, H301 Acute Tox. 2, H330 Eye Dam. 1, H318 Repr. 1B, H360D STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	ATE [Oral] = 221 mg/kg ATE [Inhalation (dusts and mists)] = 0.14 mg/l M [Acute] = 1000 M [Chronic] = 10	[1]
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	EC: 911-418-6 CAS: 55965-84-9 Index: 613-167-00-5	<0.001	Acute Tox. 3, H301 Acute Tox. 2, H310 Acute Tox. 2, H330 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 EUH071 **See Section 16 for the full text of the H statements declared above.**	ATE [Oral] = 53 mg/kg ATE [Dermal] = 50 mg/kg ATE [Inhalation (vapours)] = 0.5 mg/l Skin Corr. 1C, H314: C ≥ 0.6% Eye Dam. 1, H318: C ≥ 0.6% Eye Irrit. 2, H319: 0.06% ≤ C < 0.6% Skin Sens. 1, H317: C ≥ 0.0015% M [Acute] = 100 M [Chronic] = 100	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit
[*] The classification as a carcinogen by inhalation applies only to mixtures placed on the market in powder form containing 1% or more of titanium dioxide particles with aerodynamic diameter ≤ 10 µm not bound within a matrix.

SECTION 3: Composition/information on ingredients

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

SECTION 5: Firefighting measures

Hazards from the substance or mixture : In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and material for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

SECTION 7: Handling and storage

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
2-(2-butoxyethoxy)ethanol	**Regulation on Limit Values - MAC (Austria, 12/2024)** TWA 8 hours: 10 ppm. TWA 8 hours: 67.5 mg/m³. PEAK 15 minutes: 15 ppm 4 times per shift. PEAK 15 minutes: 101.2 mg/m³ 4 times per shift.
Dipropyleneglycolmethylether	**Regulation on Limit Values - MAC (Austria, 12/2024) [Dipropylenglykolmonomethylether (Isomerengemisch)]** Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 307 mg/m³. CEIL 5 minutes: 100 ppm 8 times per shift. CEIL 5 minutes: 614 mg/m³ 8 times per shift.
2-Butoxyethanol	**Regulation on Limit Values - MAC (Austria, 12/2024)** Absorbed through skin. TWA 8 hours: 20 ppm. TWA 8 hours: 98 mg/m³. PEAK 30 minutes: 40 ppm 4 times per shift. PEAK 30 minutes: 200 mg/m³ 4 times per shift.
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	**Regulation on Limit Values - MAC (Austria, 12/2024) [5-Chlor-2-methyl-2,3-dihydroisothiazol-3-on und 2-Methyl-2,3-dihydroisothiazol-3-on (Gemisch im Verhältnis 3:1)]** Skin sensitiser. TWA 8 hours: 0.05 mg/m³.

SECTION 8: Exposure controls/personal protection

2-(2-butoxyethoxy)ethanol	**Limit values (Belgium, 12/2023)** STEL 15 minutes: 15 ppm. TWA 8 hours: 10 ppm. TWA 8 hours: 67.5 mg/m³. STEL 15 minutes: 101.2 mg/m³.
Dipropyleneglycolmethylether	**Limit values (Belgium, 12/2023)** **[Dipropyleenglycolmonomethylether]** Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 308 mg/m³.
2-Butoxyethanol	**Limit values (Belgium, 12/2023)** Absorbed through skin. TWA 8 hours: 20 ppm. TWA 8 hours: 98 mg/m³. STEL 15 minutes: 50 ppm. STEL 15 minutes: 246 mg/m³.
2-(2-butoxyethoxy)ethanol	**Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 4/2024)** Limit value 8 hours: 67.5 mg/m³. Limit value 15 minutes: 101.2 mg/m³. Limit value 15 minutes: 15 ppm. Limit value 8 hours: 10 ppm.
Dipropyleneglycolmethylether	**Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 4/2024) [2-(Methoxymethyletoxy)propanol]** Absorbed through skin. Limit value 8 hours: 308 mg/m³. Limit value 8 hours: 50 ppm.
2-Butoxyethanol	**Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 4/2024)** Absorbed through skin. Limit value 8 hours: 98 mg/m³. Limit value 15 minutes: 246 mg/m³. Limit value 15 minutes: 50 ppm. Limit value 8 hours: 20 ppm.
2-(2-butoxyethoxy)ethanol	**Ordinance on the protection of workers from exposure to hazardous chemicals at work, exposure limit values (Annex I) (Croatia, 12/2023)** STELV 15 minutes: 101.2 mg/m³. STELV 15 minutes: 15 ppm. ELV 8 hours: 67.5 mg/m³. ELV 8 hours: 10 ppm.
Dipropyleneglycolmethylether	**Ordinance on the protection of workers from exposure to hazardous chemicals at work, exposure limit values (Annex I) (Croatia, 12/2023) [(2-metoksimetiletoksi)-propanol]** Absorbed through skin. ELV 8 hours: 308 mg/m³. ELV 8 hours: 50 ppm.
Solvent naphtha (petroleum), light aromatic	**Ordinance on the protection of workers from exposure to hazardous chemicals at work, exposure limit values (Annex I) (Croatia)** ELV: 100 ppm. ELV: 400 mg/m³.
2-Butoxyethanol	**Ordinance on the protection of workers from exposure to hazardous chemicals at work, exposure limit values (Annex I) (Croatia, 12/2023)** Absorbed through skin. STELV 15 minutes: 246 mg/m³. STELV 15 minutes: 50 ppm. ELV 8 hours: 98 mg/m³. ELV 8 hours: 20 ppm.

SECTION 8: Exposure controls/personal protection

2-(2-butoxyethoxy)ethanol	**Department of labour inspection (Cyprus, 7/2021)** STEL 15 minutes: 15 ppm. STEL 15 minutes: 101.2 mg/m³. TWA 8 hours: 10 ppm. TWA 8 hours: 67.5 mg/m³.
Dipropyleneglycolmethylether	**Department of labour inspection (Cyprus, 7/2021)** Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 308 mg/m³.
2-Butoxyethanol	**Department of labour inspection (Cyprus, 7/2021)** Absorbed through skin. STEL 15 minutes: 50 ppm. STEL 15 minutes: 246 mg/m³. TWA 8 hours: 20 ppm. TWA 8 hours: 98 mg/m³.
2-(2-butoxyethoxy)ethanol	**Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 12/2023)** TWA 8 hours: 67.5 mg/m³. TWA 8 hours: 10 ppm. STEL 15 minutes: 101.2 mg/m³. STEL 15 minutes: 15 ppm.
Dipropyleneglycolmethylether	**Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 12/2023) [(2-methoxymethylethoxy)propanol]** Absorbed through skin. TWA 8 hours: 270 mg/m³. TWA 8 hours: 43.8 ppm. STEL 15 minutes: 550 mg/m³. STEL 15 minutes: 89.3 ppm.
Solvent naphtha (petroleum), light aromatic	**Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 12/2023) [nafta solventní]** TWA 8 hours: 200 mg/m³. STEL 15 minutes: 1000 mg/m³.
3-Butoxypropan-2-ol	**Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 12/2023)** Absorbed through skin. STEL 15 minutes: 550 mg/m³. TWA 8 hours: 270 mg/m³. TWA 8 hours: 49 ppm. STEL 15 minutes: 100 ppm.
2-Butoxyethanol	**Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 12/2023)** Absorbed through skin. TWA 8 hours: 98 mg/m³. TWA 8 hours: 20 ppm. STEL 15 minutes: 200 mg/m³. STEL 15 minutes: 40.7 ppm.
2-(2-butoxyethoxy)ethanol	**Working Environment Authority (Denmark, 12/2024)** TWA 8 hours: 68 mg/m³. TWA 8 hours: 10 ppm. STEL 15 minutes: 15 ppm. STEL 15 minutes: 101 mg/m³.
Dipropyleneglycolmethylether	**Working Environment Authority (Denmark, 12/2024) [dipropylenglycolmethylether]** Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 309 mg/m³. STEL 15 minutes: 618 mg/m³. STEL 15 minutes: 100 ppm.
2-Butoxyethanol	**Working Environment Authority (Denmark, 12/2024)** Absorbed through skin. TWA 8 hours: 20 ppm. TWA 8 hours: 98 mg/m³. STEL 15 minutes: 246 mg/m³. STEL 15 minutes: 50 ppm.

SECTION 8: Exposure controls/personal protection

2-(2-butoxyethoxy)ethanol	**Occupational exposure limits, Regulation No. 293 (Estonia, 4/2024)** TWA 8 hours: 10 ppm. TWA 8 hours: 67.5 mg/m³.
Dipropyleneglycolmethylether	**Occupational exposure limits, Regulation No. 293 (Estonia, 4/2024) [dipropüleenglükooli monometüüleeter]** Absorbed through skin. TWA 8 hours: 308 mg/m³. TWA 8 hours: 50 ppm.
2-Butoxyethanol	**Occupational exposure limits, Regulation No. 293 (Estonia, 4/2024)** Absorbed through skin , Sensitiser. TWA 8 hours: 98 mg/m³. TWA 8 hours: 20 ppm. STEL 15 minutes: 246 mg/m³. STEL 15 minutes: 50 ppm.
2-(2-butoxyethoxy)ethanol	**EU OEL (Europe, 1/2022)** TWA 8 hours: 67.5 mg/m³. TWA 8 hours: 10 ppm. STEL 15 minutes: 101.2 mg/m³. STEL 15 minutes: 15 ppm.
Dipropyleneglycolmethylether	**EU OEL (Europe, 1/2022) [(2-Methoxymethylethoxy)-propanol]** Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 308 mg/m³.
2-Butoxyethanol	**EU OEL (Europe, 1/2022)** Absorbed through skin. TWA 8 hours: 20 ppm. TWA 8 hours: 98 mg/m³. STEL 15 minutes: 50 ppm. STEL 15 minutes: 246 mg/m³.
2-(2-butoxyethoxy)ethanol	**Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2021)** TWA 8 hours: 10 ppm. TWA 8 hours: 68 mg/m³.
Dipropyleneglycolmethylether	**Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2021) [(2-Metoksimetyylietoksi)-propanoli]** Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 310 mg/m³.
Solvent naphtha (petroleum), light aromatic	**Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2020)** TWA 8 hours: 100 mg/m³.
2-Butoxyethanol	**Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2021)** Absorbed through skin. TWA 8 hours: 20 ppm. TWA 8 hours: 98 mg/m³. STEL 15 minutes: 50 ppm. STEL 15 minutes: 250 mg/m³.
2-(2-butoxyethoxy)ethanol	**Ministry of Labor (France, 6/2024)** STEL 15 minutes: 101.2 mg/m³. Notes: Indicative regulatory limit values (decree of 30-06-2004 modified) STEL 15 minutes: 15 ppm. Notes: Indicative regulatory limit values (decree of 30-06-2004 modified) TWA 8 hours: 67.5 mg/m³. Notes: Indicative regulatory limit values (decree of 30-06-2004 modified) TWA 8 hours: 10 ppm. Notes: Indicative regulatory limit values (decree of 30-06-2004 modified)
Dipropyleneglycolmethylether	**Ministry of Labor (France, 6/2024) [(2-méthoxyméthyléthoxy)-propanol]** Absorbed through skin. TWA 8 hours: 50 ppm. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code) TWA 8 hours: 308 mg/m³. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)

SECTION 8: Exposure controls/personal protection

Solvent naphtha (petroleum), light aromatic	**Ministry of Labor (France, 6/2024) [hydrocarbures en C6-C12]** TWA 8 hours: 1000 mg/m³. Form: Vapour. Notes: Permissible limit values (circulars) STEL 15 minutes: 1500 mg/m³. Form: Vapour. Notes: Permissible limit values (circulars)
2-Butoxyethanol	**Ministry of Labor (France, 6/2024)** Absorbed through skin. TWA 8 hours: 10 ppm. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code) TWA 8 hours: 49 mg/m³. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code) STEL 15 minutes: 246 mg/m³. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code) STEL 15 minutes: 50 ppm. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)
2-(2-butoxyethoxy)ethanol	**TRGS 900 OEL (Germany, 6/2024)** TWA 8 hours: 67 mg/m³. PEAK 15 minutes: 100.5 mg/m³. TWA 8 hours: 10 ppm. PEAK 15 minutes: 15 ppm. **DFG MAC-values list (Germany, 7/2024)** Develop C. TWA 8 hours: 67 mg/m³. PEAK 15 minutes: 100.5 mg/m³ 4 times per shift [Interval: 1 hour]. TWA 8 hours: 10 ppm. PEAK 15 minutes: 15 ppm 4 times per shift [Interval: 1 hour].
Dipropyleneglycolmethylether	**TRGS 900 OEL (Germany, 6/2024) [(2-Methoxymethylethoxy) propanol]** TWA 8 hours: 310 mg/m³. PEAK 15 minutes: 310 mg/m³. TWA 8 hours: 50 ppm. PEAK 15 minutes: 50 ppm. **DFG MAC-values list (Germany, 7/2024) [Dipropylene glycol monomethyl ether]** Develop D. TWA 8 hours: 50 ppm. PEAK 15 minutes: 50 ppm 4 times per shift [Interval: 1 hour]. TWA 8 hours: 310 mg/m³. PEAK 15 minutes: 310 mg/m³ 4 times per shift [Interval: 1 hour].
2-Butoxyethanol	**TRGS 900 OEL (Germany, 6/2024)** Absorbed through skin. TWA 8 hours: 49 mg/m³. PEAK 15 minutes: 98 mg/m³. TWA 8 hours: 10 ppm. PEAK 15 minutes: 20 ppm. **DFG MAC-values list (Germany, 7/2024)** Develop C. Absorbed through skin. TWA 8 hours: 10 ppm. PEAK 15 minutes: 20 ppm 4 times per shift [Interval: 1 hour]. TWA 8 hours: 49 mg/m³. PEAK 15 minutes: 98 mg/m³ 4 times per shift [Interval: 1 hour].
1,2-benzisothiazol-3(2H)-one pyrithione zinc	**DFG MAC-values list (Germany, 7/2024)** Skin sensitiser. **DFG MAC-values list (Germany, 7/2024)** Absorbed through skin.
2-(2-butoxyethoxy)ethanol	**Presidential Decree 307/1986: Occupational exposure limit values (Greece, 8/2024)** STEL 15 minutes: 101.2 mg/m³. STEL 15 minutes: 15 ppm. TWA 8 hours: 67.5 mg/m³. TWA 8 hours: 10 ppm.
Dipropyleneglycolmethylether	**Presidential Decree 307/1986: Occupational exposure limit values (Greece, 8/2024) [μεθοξυμεθυλ-αιθοξυ-προπανόλη, 2-]** Absorbed through skin. TWA 8 hours: 100 ppm. TWA 8 hours: 600 mg/m³. STEL 15 minutes: 150 ppm. STEL 15 minutes: 900 mg/m³.

SECTION 8: Exposure controls/personal protection

2-Butoxyethanol	**Presidential Decree 307/1986: Occupational exposure limit values (Greece, 8/2024)** Absorbed through skin. TWA 8 hours: 25 ppm. TWA 8 hours: 120 mg/m³.
2-(2-butoxyethoxy)ethanol	**5/2020. (II. 6.) ITM Decree (Hungary, 1/2025)** TWA 8 hours: 67.5 mg/m³. PEAK 15 minutes: 101.2 mg/m³. PEAK 15 minutes: 15 ppm. TWA 8 hours: 10 ppm.
Dipropyleneglycolmethylether	**5/2020. (II. 6.) ITM Decree (Hungary, 1/2025) [(2-metoximetiletoxi)-propanol]** TWA 8 hours: 308 mg/m³. TWA 8 hours: 50 ppm.
2-Butoxyethanol	**5/2020. (II. 6.) ITM Decree (Hungary, 1/2025)** Absorbed through skin. TWA 8 hours: 98 mg/m³. PEAK 15 minutes: 246 mg/m³. PEAK 15 minutes: 50 ppm. TWA 8 hours: 20 ppm.
2-(2-butoxyethoxy)ethanol	**Ministry of Welfare, List of Exposure Limits (Iceland, 11/2024)** STEL 15 minutes: 101.2 mg/m³. STEL 15 minutes: 15 ppm. TWA 8 hours: 67.5 mg/m³. TWA 8 hours: 10 ppm.
Dipropyleneglycolmethylether	**Ministry of Welfare, List of Exposure Limits (Iceland, 11/2024) [Díprópýlenglýkólmetýleter]** Absorbed through skin. TWA 8 hours: 300 mg/m³. TWA 8 hours: 50 ppm.
2-Butoxyethanol	**Ministry of Welfare, List of Exposure Limits (Iceland, 11/2024)** Absorbed through skin. STEL 15 minutes: 246 mg/m³. STEL 15 minutes: 50 ppm. TWA 8 hours: 100 mg/m³. TWA 8 hours: 20 ppm.
2-(2-butoxyethoxy)ethanol	**NAOSH (Ireland, 4/2024)** Notes: EU derived Occupational Exposure Limit Values OELV 8 hours: 10 ppm. OELV 15 minutes: 101.2 mg/m³. OELV 8 hours: 67.5 mg/m³. OELV 15 minutes: 15 ppm.
Dipropyleneglycolmethylether	**NAOSH (Ireland, 4/2024) [(2-methoxymethylethoxy)-1-propanol]** Absorbed through skin. Notes: EU derived Occupational Exposure Limit Values OELV 8 hours: 50 ppm. OELV 8 hours: 308 mg/m³.
2-Butoxyethanol	**NAOSH (Ireland, 4/2024)** Absorbed through skin. Notes: EU derived Occupational Exposure Limit Values OELV 8 hours: 20 ppm. OELV 8 hours: 98 mg/m³. OELV 15 minutes: 50 ppm. OELV 15 minutes: 246 mg/m³.
2-(2-butoxyethoxy)ethanol	**Legislative Decree No. 81/2008. Title IX. Protection from chemical agents, carcinogens and mutagens (Italy, 9/2024)** Limit value 8 hours: 10 ppm. Limit value 8 hours: 67.5 mg/m³. Short Term 15 minutes: 15 ppm. Short Term 15 minutes: 101.2 mg/m³.
Dipropyleneglycolmethylether	**Legislative Decree No. 81/2008. Title IX. Protection from chemical agents, carcinogens and mutagens (Italy, 9/2024)** Absorbed through skin. Limit value 8 hours: 50 ppm. Limit value 8 hours: 308 mg/m³.

SECTION 8: Exposure controls/personal protection

2-Butoxyethanol	**Legislative Decree No. 81/2008. Title IX. Protection from chemical agents, carcinogens and mutagens (Italy, 9/2024)** Absorbed through skin. Limit value 8 hours: 20 ppm. Limit value 8 hours: 98 mg/m³. Short Term 15 minutes: 50 ppm. Short Term 15 minutes: 246 mg/m³.
2-(2-butoxyethoxy)ethanol	**Ministers Cabinet Regulations Nr.325 - AER (Latvia, 3/2024)** STEL 15 minutes: 101.2 mg/m³. TWA 8 hours: 10 ppm. STEL 15 minutes: 15 ppm. TWA 8 hours: 67.5 mg/m³.
Dipropyleneglycolmethylether	**Ministers Cabinet Regulations Nr.325 - AER (Latvia, 3/2024)** **[Metoksipropoksi propanols]** Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 308 mg/m³.
2-Butoxyethanol	**Ministers Cabinet Regulations Nr.325 - AER (Latvia, 3/2024)** Absorbed through skin. TWA 8 hours: 98 mg/m³. TWA 8 hours: 20 ppm. STEL 15 minutes: 50 ppm. STEL 15 minutes: 246 mg/m³.
2-(2-butoxyethoxy)ethanol	**Lithuanian Hygiene Standard HN 23 (Lithuania, 1/2024)** TWA 8 hours: 67.5 mg/m³. TWA 8 hours: 10 ppm. STEL 15 minutes: 101.2 mg/m³. STEL 15 minutes: 15 ppm.
Dipropyleneglycolmethylether	**Lithuanian Hygiene Standard HN 23 (Lithuania, 1/2024)** Absorbed through skin. TWA 8 hours: 308 mg/m³. TWA 8 hours: 50 ppm. STEL 15 minutes: 450 mg/m³. STEL 15 minutes: 75 ppm.
2-Butoxyethanol	**Lithuanian Hygiene Standard HN 23 (Lithuania, 1/2024)** Absorbed through skin. TWA 8 hours: 50 mg/m³. TWA 8 hours: 10 ppm. STEL 15 minutes: 100 mg/m³. STEL 15 minutes: 20 ppm.
2-(2-butoxyethoxy)ethanol	**Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021)** STEL 15 minutes: 15 ppm. STEL 15 minutes: 101.2 mg/m³. TWA 8 hours: 10 ppm. TWA 8 hours: 67.5 mg/m³.
Dipropyleneglycolmethylether	**Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021) [(2-méthoxyméthyléthoxy)-propanol]** Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 308 mg/m³.
2-Butoxyethanol	**Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021)** Absorbed through skin. TWA 8 hours: 20 ppm. TWA 8 hours: 98 mg/m³. STEL 15 minutes: 50 ppm. STEL 15 minutes: 246 mg/m³.

SECTION 8: Exposure controls/personal protection

2-(2-butoxyethoxy)ethanol	**EU OEL (Europe, 1/2022)** TWA 8 hours: 67.5 mg/m³. TWA 8 hours: 10 ppm. STEL 15 minutes: 101.2 mg/m³. STEL 15 minutes: 15 ppm.
Dipropyleneglycolmethylether	**EU OEL (Europe, 1/2022) [(2-Methoxymethylethoxy)-propanol]** Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 308 mg/m³.
2-Butoxyethanol	**EU OEL (Europe, 1/2022)** Absorbed through skin. TWA 8 hours: 20 ppm. TWA 8 hours: 98 mg/m³. STEL 15 minutes: 50 ppm. STEL 15 minutes: 246 mg/m³.
2-(2-butoxyethoxy)ethanol	**Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 5/2024)** Absorbed through skin. TWA 8 hours: 50 mg/m³. STEL 15 minutes: 100 mg/m³. TWA 8 hours: 7.4 ppm. STEL 15 minutes: 14.8 ppm.
Dipropyleneglycolmethylether	**Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 5/2024) [dipropyleenglycolmethylether]** TWA 8 hours: 300 mg/m³. TWA 8 hours: 48.7 ppm.
2-Butoxyethanol	**Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 5/2024)** Absorbed through skin. TWA 8 hours: 100 mg/m³. STEL 15 minutes: 246 mg/m³. TWA 8 hours: 20.4 ppm. STEL 15 minutes: 50 ppm.
2-(2-butoxyethoxy)ethanol	**FOR-2011-12-06-1358 (Norway, 5/2024)** TWA 8 hours: 10 ppm. TWA 8 hours: 68 mg/m³.
Dipropyleneglycolmethylether	**FOR-2011-12-06-1358 (Norway, 5/2024) [(2-metoksymetyletoksy)-propanol]** Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 300 mg/m³.
2-Butoxyethanol	**FOR-2011-12-06-1358 (Norway, 5/2024)** Absorbed through skin. TWA 8 hours: 10 ppm. TWA 8 hours: 50 mg/m³.
2-(2-butoxyethoxy)ethanol	**Regulation of the Minister of Family, Labor and Social Policy of June 12, 2018 on the maximum permissible concentrations and intensities of factors harmful to health in the work environment (Journal of Laws of 2018, item 1286) (Poland, 7/2024)** TWA 8 hours: 67 mg/m³. STEL 15 minutes: 100 mg/m³.
Dipropyleneglycolmethylether	**Regulation of the Minister of Family, Labor and Social Policy of June 12, 2018 on the maximum permissible concentrations and intensities of factors harmful to health in the work environment (Journal of Laws of 2018, item 1286) (Poland, 7/2024) [dipropylene glycol methyl ether]** Absorbed through skin. TWA 8 hours: 240 mg/m³. STEL 15 minutes: 480 mg/m³.
2-Butoxyethanol	**Regulation of the Minister of Family, Labor and Social Policy of June 12, 2018 on the maximum permissible concentrations and intensities of factors harmful to health in the work environment (Journal of Laws of 2018, item 1286) (Poland, 7/2024)** Absorbed through skin. TWA 8 hours: 98 mg/m³. STEL 15 minutes: 200 mg/m³.
reaction mass of: 5-chloro-2-methyl-	**Regulation of the Minister of Family, Labor and Social Policy**

4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	**of June 12, 2018 on the maximum permissible concentrations and intensities of factors harmful to health in the work environment (Journal of Laws of 2018, item 1286) (Poland, 7/2024)** Absorbed through skin. TWA 8 hours: 0.2 mg/m³. STEL 15 minutes: 0.4 mg/m³.
2-(2-butoxyethoxy)ethanol	**Portuguese Institute of Quality (Portugal, 11/2014)** TWA 8 hours: 10 ppm. Form: Inhalable fraction and vapor. **Decree-Law 24/2012 - Occupational exposure limits for chemical agents (Portugal, 6/2021)** STEL 15 minutes: 15 ppm. STEL 15 minutes: 101.2 mg/m³. TWA 8 hours: 10 ppm. TWA 8 hours: 67.5 mg/m³.
Dipropyleneglycolmethylether	**Portuguese Institute of Quality (Portugal, 11/2014) [2-metoximetiletoxipropanol]** Absorbed through skin. TWA 8 hours: 100 ppm. STEL 15 minutes: 150 ppm. **Decree-Law 24/2012 - Occupational exposure limits for chemical agents (Portugal, 6/2021) [2-metoximetiletoxi propanol]** Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 308 mg/m³.
2-Butoxyethanol	**Portuguese Institute of Quality (Portugal, 11/2014)** A3. TWA 8 hours: 20 ppm. **Decree-Law 24/2012 - Occupational exposure limits for chemical agents (Portugal, 6/2021)** Absorbed through skin. STEL 15 minutes: 50 ppm. STEL 15 minutes: 246 mg/m³. TWA 8 hours: 20 ppm. TWA 8 hours: 98 mg/m³.
2-(2-butoxyethoxy)ethanol	**HG 1218/2006, Annex 1, with subsequent modifications and additions (Romania, 3/2024)** VLA 8 hours: 67.5 mg/m³. Short term 15 minutes: 101.2 mg/m³. Short term 15 minutes: 15 ppm. VLA 8 hours: 10 ppm.
Dipropyleneglycolmethylether	**HG 1218/2006, Annex 1, with subsequent modifications and additions (Romania, 3/2024)** Absorbed through skin. VLA 8 hours: 308 mg/m³. VLA 8 hours: 50 ppm.
Solvent naphtha (petroleum), light aromatic	**HG 1218/2006, Annex 1, with subsequent modifications and additions (Romania, 3/2024) [Solvent nafta]** Absorbed through skin. VLA 8 hours: 100 mg/m³. Short term 15 minutes: 200 mg/m³.
2-Butoxyethanol	**HG 1218/2006, Annex 1, with subsequent modifications and additions (Romania, 3/2024)** Absorbed through skin. VLA 8 hours: 98 mg/m³. VLA 8 hours: 20 ppm. Short term 15 minutes: 246 mg/m³. Short term 15 minutes: 50 ppm.
2-(2-butoxyethoxy)ethanol	**Government regulation SR c. 355/2006 (Slovakia, 6/2024)** Inhalation sensitiser. TWA 8 hours: 67.5 mg/m³. STEL 15 minutes: 101.2 mg/m³. TWA 8 hours: 10 ppm. STEL 15 minutes: 15 ppm.
Dipropyleneglycolmethylether	**Government regulation SR c. 355/2006 (Slovakia, 6/2024) [2-metoxymetyl-etoxypropanol]** Absorbed through skin , Inhalation sensitiser. TWA 8 hours: 308 mg/m³ (2-methoxymetyl-ethoxypropanol).

SECTION 8: Exposure controls/personal protection

	TWA 8 hours: 50 ppm (2-methoxymetyl-ethoxypropanol).
2-Butoxyethanol	**Government regulation SR c. 355/2006 (Slovakia, 6/2024)** Absorbed through skin , Inhalation sensitiser. TWA 8 hours: 98 mg/m³. TWA 8 hours: 20 ppm. STEL 15 minutes: 246 mg/m³. STEL 15 minutes: 50 ppm.
pyrithione zinc	**Government regulation SR c. 355/2006 (Slovakia, 6/2024) [zinok a jeho anorganické zlúčeniny]** Inhalation sensitiser. TWA 8 hours: 0.1 mg/m³ (Zinc and its inorganic compounds). Form: Respirable fraction. TWA 8 hours: 2 mg/m³ (Zinc and its inorganic compounds). Form: Inhalable fraction.
2-(2-butoxyethoxy)ethanol	**Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 4/2024)** TWA 8 hours: 67.5 mg/m³. TWA 8 hours: 10 ppm. KTV 15 minutes: 101.2 mg/m³ 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes]. KTV 15 minutes: 15 ppm 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes].
Dipropyleneglycolmethylether	**Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 4/2024) [(2-metoksimetiletoksi)propanol]** Absorbed through skin. TWA 8 hours: 308 mg/m³. TWA 8 hours: 50 ppm. KTV 15 minutes: 50 ppm 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes]. KTV 15 minutes: 308 mg/m³ 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes].
2-Butoxyethanol	**Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 4/2024)** Absorbed through skin. TWA 8 hours: 98 mg/m³. TWA 8 hours: 20 ppm. KTV 15 minutes: 246 mg/m³ 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes]. KTV 15 minutes: 50 ppm 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes].
2-(2-butoxyethoxy)ethanol	**National institute of occupational safety and health (Spain, 1/2024)** TWA 8 hours: 67.5 mg/m³. TWA 8 hours: 10 ppm. STEL 15 minutes: 15 ppm. STEL 15 minutes: 101.2 mg/m³.
Dipropyleneglycolmethylether	**National institute of occupational safety and health (Spain, 1/2024) [éter metílico de dipropilenglicol]** Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 308 mg/m³.
2-Butoxyethanol	**National institute of occupational safety and health (Spain, 1/2024)** Absorbed through skin. TWA 8 hours: 20 ppm. TWA 8 hours: 98 mg/m³. STEL 15 minutes: 245 mg/m³. STEL 15 minutes: 50 ppm.
2-(2-butoxyethoxy)ethanol	**Work environment authority Regulation 2018:1 (Sweden, 11/2022)** TWA 8 hours: 10 ppm. TWA 8 hours: 68 mg/m³. STEL 15 minutes: 15 ppm. STEL 15 minutes: 101 mg/m³.
Dipropyleneglycolmethylether	**Work environment authority Regulation 2018:1 (Sweden,**

	11/2022) [dipropylene glycol monomethyl ether] Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 300 mg/m³. STEL 15 minutes: 75 ppm. STEL 15 minutes: 450 mg/m³.
2-Butoxyethanol	**Work environment authority Regulation 2018:1 (Sweden, 11/2022)** Absorbed through skin. TWA 8 hours: 10 ppm. TWA 8 hours: 50 mg/m³. STEL 15 minutes: 50 ppm. STEL 15 minutes: 246 mg/m³.
2-(2-butoxyethoxy)ethanol	**SUVA (Switzerland, 1/2025)** TWA 8 hours: 67 mg/m³. Form: vapour and aerosols. STEL 15 minutes: 101 mg/m³. Form: vapour and aerosols. STEL 15 minutes: 15 ppm. Form: vapour and aerosols. TWA 8 hours: 10 ppm. Form: vapour and aerosols.
Dipropyleneglycolmethylether	**SUVA (Switzerland, 1/2025) [Dipropylenglykolmethylether (Isomerengemisch)]** STEL 15 minutes: 50 ppm. Form: vapour and aerosols. STEL 15 minutes: 300 mg/m³. Form: vapour and aerosols. TWA 8 hours: 50 ppm. Form: vapour and aerosols. TWA 8 hours: 300 mg/m³. Form: vapour and aerosols.
2-Butoxyethanol	**SUVA (Switzerland, 1/2025)** Absorbed through skin. TWA 8 hours: 10 ppm. TWA 8 hours: 49 mg/m³. STEL 15 minutes: 20 ppm. STEL 15 minutes: 98 mg/m³.
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	**SUVA (Switzerland, 1/2025)** Sensitiser. STEL 15 minutes: 0.4 mg/m³. Form: Inhalable fraction. TWA 8 hours: 0.2 mg/m³. Form: Inhalable fraction.
2-(2-butoxyethoxy)ethanol	**EH40/2005 WELs (United Kingdom (UK), 1/2020)** TWA 8 hours: 10 ppm. TWA 8 hours: 67.5 mg/m³. STEL 15 minutes: 15 ppm. STEL 15 minutes: 101.2 mg/m³.
2-Butoxyethanol	**EH40/2005 WELs (United Kingdom (UK), 1/2020)** Absorbed through skin. STEL 15 minutes: 50 ppm. TWA 8 hours: 25 ppm. STEL 15 minutes: 246 mg/m³. TWA 8 hours: 123 mg/m³.

Biological exposure indices

Product/ingredient name	Exposure indices
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
2-Butoxyethanol	**Government regulation of Czech Republic Limit Values of Biological Exposure Tests (Czech Republic, 9/2015)** Biological limit values: 0.17 mmol/mmol creatinine, butoxyacetic acid (after hydrolysis) [in urine]. Sampling time: the end of the shift at the end of the week. Biological limit values: 200 mg/g creatinine, butoxyacetic acid (after hydrolysis) [in urine]. Sampling time: the end of the shift at the end of the week.

No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
2-Butoxyethanol	**Biological limit values (BLV) - Labour Code / ANSES (France, 4/2023) [2- butoxyéthanol et son acétate]** BLV: 100 mg/g Cr, 2-butoxyacetic acid [in urine]. Sampling time: end of shift (regardless of the day of the week).
2-Butoxyethanol	**DFG BEI-values list (Germany, 7/2024)** Notes: danger from percutaneous absorption (see p. 211 and p. 228). BEI: 150 mg/g creatinine, butoxyacetic acid (after hydrolysis) [in urine]. Sampling time: at the end of the shift, for long-term exposures after several previous shifts. **TRGS 903 - BEI Values (Germany, 10/2024)** BEI: 150 mg/g creatinine, butoxy acetic acid (after hydrolysis) [in urine]. Sampling time: at the end of the shift, for long-term exposure after several previous shifts.
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
2-Butoxyethanol	**NAOSH BGVs (Ireland, 1/2011)** BMGV: 200 mg/g creatinine, BAA [in urine]. Sampling time: end of shift - As soon as possible after exposure ceases.
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
2-Butoxyethanol	**Portuguese Institute of Quality (Portugal, 11/2014)** BEI: 200 mg/g creatinine, butoxyacetic acid (BAA) [in urine]. Sampling time: end of shift.
No exposure indices known.	
No exposure indices known.	
2-Butoxyethanol	**Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 4/2024)** BAT: 150 mg/g creatinine, butoxyacetic acid (after hydrolysis) [in urine]. Sampling time: at the end of the work shift, at long-term exposure: at the end of the work shift after several consecutive workdays.
2-Butoxyethanol	**National institute of occupational safety and health (Spain, 1/2024)** VLB: 200 mg/g creatinine, butoxyacetic acid [in urine]. Sampling time: end of shift.
No exposure indices known.	
2-Butoxyethanol	**SUVA (Switzerland, 1/2025)** BEI: 150 mg/g creatinine, 2-butoxy acetic acid (after hydrolisis) [in urine]. Sampling time: immediately after exposure or after working hours. In case of long-term exposure: after more than one shift.

2-Butoxyethanol	**EH40/2005 BMGVs (United Kingdom (UK), 1/2020)** BGV: 240 mmol/mol creatinine, butoxyacetic acid [in urine]. Sampling time: post shift.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Result
titanium dioxide	**DNEL - General population - Long term - Inhalation** 28 µg/m³ Effects: Local **DNEL - Workers - Long term - Inhalation** 170 µg/m³ Effects: Local
2-(2-butoxyethoxy)ethanol	**DNEL - General population - Long term - Oral** 6.25 mg/kg bw/day Effects: Systemic **DNEL - Workers - Long term - Inhalation** 67.5 mg/m³ Effects: Local **DNEL - Workers - Short term - Inhalation** 101.2 mg/m³ Effects: Local
Dipropyleneglycolmethylether	**DNEL - General population - Long term - Oral** 36 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Inhalation** 37.2 mg/m³ Effects: Systemic **DNEL - General population - Long term - Dermal** 121 mg/kg bw/day Effects: Systemic **DNEL - Workers - Long term - Dermal** 283 mg/kg bw/day Effects: Systemic **DNEL - Workers - Long term - Inhalation** 308 mg/m³ Effects: Systemic
Solvent naphtha (petroleum), light aromatic	**DNEL - General population - Long term - Inhalation** 0.41 mg/m³ Effects: Systemic **DNEL - Workers - Long term - Inhalation** 1.9 mg/m³ Effects: Systemic **DNEL - General population - Long term - Inhalation**

	178.57 mg/m³ Effects: Local **DNEL - General population - Short term - Inhalation** 640 mg/m³ Effects: Local **DNEL - Workers - Long term - Inhalation** 837.5 mg/m³ Effects: Local **DNEL - Workers - Short term - Inhalation** 1066.67 mg/m³ Effects: Local **DNEL - General population - Short term - Inhalation** 1152 mg/m³ Effects: Systemic **DNEL - Workers - Short term - Inhalation** 1286.4 mg/m³ Effects: Systemic
3-Butoxypropan-2-ol	**DNEL - General population - Long term - Oral** 12.5 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Dermal** 22 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Inhalation** 43 mg/m³ Effects: Systemic **DNEL - Workers - Long term - Dermal** 52 mg/kg bw/day Effects: Systemic **DNEL - Workers - Long term - Inhalation** 147 mg/m³ Effects: Systemic
2-Butoxyethanol	**DNEL - General population - Long term - Oral** 6.3 mg/kg bw/day Effects: Systemic **DNEL - General population - Short term - Oral** 26.7 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Inhalation** 59 mg/m³ Effects: Systemic **DNEL - Workers - Long term - Inhalation** 98 mg/m³ Effects: Systemic **DNEL - General population - Short term - Inhalation** 147 mg/m³ Effects: Local **DNEL - Workers - Short term - Inhalation** 246 mg/m³ Effects: Local

SECTION 8: Exposure controls/personal protection

	DNEL - General population - Short term - Inhalation 426 mg/m³ Effects: Systemic **DNEL - Workers - Short term - Inhalation** 1091 mg/m³ Effects: Systemic
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	**DNEL - General population - Long term - Oral** 0.18 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Inhalation** 0.31 mg/m³ Effects: Systemic **DNEL - General population - Long term - Dermal** 0.9 mg/kg bw/day Effects: Systemic **DNEL - Workers - Long term - Inhalation** 1.27 mg/m³ Effects: Systemic **DNEL - Workers - Long term - Dermal** 1.8 mg/kg bw/day Effects: Systemic
2,4,7,9-tetramethyl-5-decyne-4,7-diol	**DNEL - General population - Long term - Oral** 0.29 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Dermal** 0.29 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Inhalation** 0.505 mg/m³ Effects: Systemic **DNEL - Workers - Long term - Dermal** 0.812 mg/kg bw/day Effects: Systemic **DNEL - Workers - Long term - Inhalation** 2.86 mg/m³ Effects: Systemic
1,2-benzisothiazol-3(2H)-one	**DNEL - General population - Long term - Dermal** 0.345 mg/kg bw/day Effects: Systemic **DNEL - Workers - Long term - Dermal** 0.966 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Inhalation** 1.2 mg/m³ Effects: Systemic **DNEL - Workers - Long term - Inhalation** 6.81 mg/m³ Effects: Systemic

pyrithione zinc	**DNEL - Workers - Long term - Dermal** 0.01 mg/kg bw/day Effects: Systemic
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	**DNEL - General population - Long term - Inhalation** 0.02 mg/m³ Effects: Local
	DNEL - Workers - Long term - Inhalation 0.02 mg/m³ Effects: Local
	DNEL - General population - Short term - Inhalation 0.04 mg/m³ Effects: Local
	DNEL - Workers - Short term - Inhalation 0.04 mg/m³ Effects: Local
	DNEL - General population - Long term - Oral 0.09 mg/kg bw/day Effects: Systemic
	DNEL - General population - Short term - Oral 0.11 mg/kg bw/day Effects: Systemic

PNECs

Not available.

8.2 Exposure controls

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Recommendations : Wear suitable gloves tested to EN374.

> 8 hours (breakthrough time):	Nitrile gloves. thickness > 0.3 mm
Not recommended	polyvinyl alcohol (PVA) gloves

SECTION 8: Exposure controls/personal protection

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Filter type (spray application): A P

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid.

Colour : Various

Odour : Slight

Odour threshold : Not available.

Melting point/freezing point : Not available.

Initial boiling point and boiling range :

Ingredient name	°C	°F	Method
water	100	212	
Solvent naphtha (petroleum), light aromatic	135 to 210	275 to 410	

Flammability : Not available.

Lower and upper explosion limit : Lower: 0.8% (2-(2-butoxyethoxy)ethanol)
Upper: 14% ((2-methoxymethylethoxy)propanol)

Flash point : Closed cup: >100°C (>212°F)

Auto-ignition temperature :

Ingredient name	°C	°F	Method
Dipropyleneglycolmethylether	207	404.6	EU A.15
2-(2-butoxyethoxy)ethanol	210	410	DIN 51794

Decomposition temperature : Not available.

pH : 7 to 9

Viscosity : Not available.

Solubility(ies) :

Not available.

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not applicable.

Vapour pressure :

SECTION 9: Physical and chemical properties

Ingredient name	Vapour Pressure at 20˚C			Vapour pressure at 50˚C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
water	17.5	2.3				
3-Butoxypropan-2-ol	1.05	0.14	OECD 104			

Relative density : Not available.

Density : 1.2 g/cm³

Vapour density : Not available.

Particle characteristics

Median particle size : Not applicable.

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Explosive properties : Not available.

Oxidising properties : Not available.

9.2.2 Other safety characteristics

Not applicable.

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : No specific data.

10.5 Incompatible materials : No specific data.

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity

Product/ingredient name	Result
2-(2-butoxyethoxy)ethanol	**Rabbit - Dermal - LD50** 2700 mg/kg **Rat - Oral - LD50** 4500 mg/kg Toxic effects: Behavioral - Tetany Lung, Thorax, or Respiration - Dyspnea Liver - Other changes
Solvent naphtha (petroleum), light aromatic	**Rat - Oral - LD50** 8400 mg/kg Toxic effects: Behavioral - Somnolence (general depressed activity) Behavioral - Tremor Lung, Thorax, or Respiration - Other changes
3-Butoxypropan-2-ol	**Rabbit - Dermal - LD50** 3100 mg/kg
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl	**Rat - Oral - LD50** 3230 mg/kg

1,2,2,6,6-pentamethyl-4-piperidyl sebacate	**Rat - Dermal - LD50** >3170 mg/kg
1,2-benzisothiazol-3(2H)-one	**Rat - Oral - LD50** 1020 mg/kg
pyrithione zinc	**Rat - Oral - LD50** 177 mg/kg **Rabbit - Dermal - LD50** 100 mg/kg **Rat - Inhalation - LC50 Dusts and mists** 140 mg/m³ [4 hours] Toxic effects: Lung, Thorax, or Respiration - Acute pulmonary edema Lung, Thorax, or Respiration - Dyspnea Gross Metabolite Changes - Weight loss or decreased weight gain
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	**Rat - Oral - LD50** 53 mg/kg Toxic effects: Behavioral - Somnolence (general depressed activity) Behavioral - Ataxia Lung, Thorax, or Respiration - Respiratory depression

Conclusion/Summary [Product] : Not available.

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
AQUAFINE 8336-20	N/A	N/A	N/A	334.1	N/A
2-(2-butoxyethoxy)ethanol	4500	2700	N/A	N/A	N/A
Solvent naphtha (petroleum), light aromatic	8400	N/A	N/A	N/A	N/A
3-Butoxypropan-2-ol	N/A	3100	N/A	N/A	N/A
2-Butoxyethanol	1200	N/A	N/A	3	N/A
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	3230	N/A	N/A	N/A	N/A
1,2-benzisothiazol-3(2H)-one	450	N/A	N/A	N/A	0.21
pyrithione zinc	221	N/A	N/A	N/A	0.14
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	53	50	N/A	0.5	N/A

Skin corrosion/irritation

Product/ingredient name	Result
titanium dioxide	**Human - Skin - Mild irritant** Duration of treatment/exposure: 72 hours Amount/concentration applied: 300 ug I
Dipropyleneglycolmethylether	**Rabbit - Skin - Mild irritant** Amount/concentration applied: 500 mg
3-Butoxypropan-2-ol	**Rabbit - Skin - Moderate irritant**
2-Butoxyethanol	**Rabbit - Skin - Mild irritant** Amount/concentration applied: 500 mg
2,4,7,9-tetramethyl-5-decyne-4,7-diol	**Rabbit - Skin - Mild irritant** Amount/concentration applied: 0.5 gm

1,2-benzisothiazol-3(2H)-one	**Human - Skin - Mild irritant** Duration of treatment/exposure: 48 hours Amount/concentration applied: 5 %
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	**Human - Skin - Severe irritant** Amount/concentration applied: 0.01 %

Conclusion/Summary [Product] : Not available.

Ingredient name	Conclusion/Summary
3-Butoxypropan-2-ol	Slightly irritating to the skin.

Serious eye damage/eye irritation

Product/ingredient name	Result
2-(2-butoxyethoxy)ethanol	**Rabbit - Eyes - Moderate irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 20 mg **Rabbit - Eyes - Severe irritant** Amount/concentration applied: 20 mg
Dipropyleneglycolmethylether	**Human - Eyes - Mild irritant** Amount/concentration applied: 8 mg **Rabbit - Eyes - Mild irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 mg
Solvent naphtha (petroleum), light aromatic	**Rabbit - Eyes - Mild irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 100 uL
2-Butoxyethanol	**Rabbit - Eyes - Moderate irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 100 mg **Rabbit - Eyes - Severe irritant** Amount/concentration applied: 100 mg
2,4,7,9-tetramethyl-5-decyne-4,7-diol	**Rabbit - Eyes - Severe irritant** Amount/concentration applied: 0.1 Ml

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Not available.

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

SECTION 11: Toxicological information

Germ cell mutagenicity

Not available.

Conclusion/Summary [Product] : Not available.

Carcinogenicity

It has been observed that the carcinogenic hazard of this product arises when respirable dust is inhaled in quantities leading to significant impairment of particle clearance mechanisms in the lung.

Not available.

Conclusion/Summary [Product] : Not available.

Reproductive toxicity

Not available.

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Result
Solvent naphtha (petroleum), light aromatic	STOT SE 3, H335 (Respiratory tract irritation) STOT SE 3, H336 (Narcotic effects)

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Result
pyrithione zinc	STOT RE 1, H372

Aspiration hazard

Product/ingredient name	Result
Solvent naphtha (petroleum), light aromatic	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure

Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

SECTION 11: Toxicological information

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary [Product] : Not available.

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

Conclusion/Summary [Product] : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result
titanium dioxide	**Acute - LC50 - Marine water** Fish - Mummichog - *Fundulus heteroclitus* >1000000 µg/l [96 hours] Effect: Mortality **Acute - LC50 - Fresh water** Crustaceans - Water flea - *Ceriodaphnia dubia* - Neonate Age: <24 hours 3 mg/l [48 hours] Effect: Mortality
2-(2-butoxyethoxy)ethanol	**Acute - LC50 - Fresh water** Fish - Bluegill - *Lepomis macrochirus* Size: 33 to 75 mm 1300000 µg/l [96 hours] Effect: Mortality
Solvent naphtha (petroleum), light aromatic	**Acute - LC50** Fish 9.2 mg/l [96 hours] **Acute - EC50** Daphnia 3.2 mg/l [48 hours]
2-Butoxyethanol	**Acute - LC50 - Marine water** Fish - Inland silverside - *Menidia beryllina* Size: 40 to 100 mm 1250000 µg/l [96 hours] Effect: Mortality **Acute - LC50 - Marine water** Crustaceans - Common shrimp, sand shrimp - *Crangon crangon* 800000 µg/l [48 hours] Effect: Mortality
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl	**Acute - LC50** OECD [Fish, Acute Toxicity Test]

1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Fish - *Brachydanio rerio* 0.9 mg/l [96 hours] **EC50** OECD [Alga, Growth Inhibition Test] Aquatic plants - *Desmodesmodus subspicatus* 1.68 mg/l [72 hours] **Chronic - NOEC** OECD [Daphnia Magna Reproduction Test] Daphnia - Daphnia 1 mg/l [21 days]
2,4,7,9-tetramethyl-5-decyne-4,7-diol	**LC50** Fish - *Cyprinus carpio* 42 mg/l [96 hours] **EC50** Daphnia - *Daphnia magna* 91 mg/l [48 hours]
1,2-benzisothiazol-3(2H)-one	**Acute - LC50 - Fresh water** OECD [Fish, Acute Toxicity Test] Fish - Trout - *Onorhynchus Mykiss* 1.9 mg/l [96 hours] **Acute - EC50** OECD 202 [Daphnia sp. Acute Immobilization Test and Reproduction Test] Daphnia - Daphnia - *Daphnia Magna* 3.7 mg/l [48 hours] **Acute - EC50 - Marine water** OECD 201 [Alga, Growth Inhibition Test] Algae - Algae - *Skeletonema Costatum* 0.36 mg/l [72 hours] **Acute - NOEC - Marine water** OECD 201 [Alga, Growth Inhibition Test] Algae - Algae - *Skeletonema Costatum* 0.15 mg/l [72 hours]
pyrithione zinc	**Acute - EC50 - Marine water** Algae - Diatom - *Thalassiosira pseudonana* 0.51 µg/l [96 hours] Effect: Population **Chronic - EC10 - Marine water** Algae - Diatom - *Thalassiosira pseudonana* 0.36 µg/l [96 hours] Effect: Population **Chronic - NOEC - Fresh water** US EPA Daphnia - Water flea - *Daphnia magna* 2.7 ppb [21 days] Effect: Growth **Acute - EC50 - Fresh water** US EPA Daphnia - Water flea - *Daphnia magna* Age: <24 hours 8.25 ppb [48 hours] Effect: Intoxication

Acute - LC50 - Fresh water
US EPA
Fish - Fathead minnow - *Pimephales promelas*
Weight: 0.28 g
2.68 ppb [96 hours]
Effect: Mortality

Conclusion/Summary [Product] : Not available.

12.2 Persistence and degradability

Product/ingredient name	Result
1,2-benzisothiazol-3(2H)-one	EU 24% [28 days]

Conclusion/Summary [Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
1,2-benzisothiazol-3(2H)-one	-	-	Inherent

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
2-(2-butoxyethoxy)ethanol	1	-	Low
Dipropyleneglycolmethylether	0.004	-	Low
Solvent naphtha (petroleum), light aromatic	-	10 to 2500	High
3-Butoxypropan-2-ol	1.2	-	Low
2-Butoxyethanol	0.81	-	Low
1,2-benzisothiazol-3(2H)-one	-	3.2	Low
pyrithione zinc	0.9	11 [OECD 305 E]	Low

12.4 Mobility in soil

Soil/water partition coefficient

Product/ingredient name	logKoc	Koc
2-(2-butoxyethoxy)ethanol	1.6	36.5981
3-Butoxypropan-2-ol	1.5	28.6002
2-Butoxyethanol	1.8	67.3685
2,4,7,9-tetramethyl-5-decyne-4,7-diol	1.9	83.8929
1,2-benzisothiazol-3(2H)-one	1.9	73.142

Results of PMT and vPvM assessment

Product/ingredient name	PMT	P	M	T	vPvM	vP	vM
titanium dioxide	No	No	No	No	No	No	No
2-(2-butoxyethoxy)ethanol	No	No	No	No	No	No	No
Dipropyleneglycolmethylether	No	No	No	No	No	No	No
Solvent naphtha (petroleum), light aromatic	No	No	No	No	No	No	No
3-Butoxypropan-2-ol	No	No	No	No	No	No	No
2-Butoxyethanol	No	No	No	No	No	No	No
2-Propenoic acid, 2-methyl-, polymer with ethyl 2-propenoate	No	No	No	No	No	No	No
Reaction mass of Bis (1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	No	No	No	No	No	No	No
2,4,7,9-tetramethyl-5-decyne-4,7-diol	No	No	No	No	No	No	No
1,2-benzisothiazol-3(2H)-one	No	No	No	No	No	No	No

pyrithione zinc	No	No	No	No	No	No	No
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	No	No	No	No	No	No	No

Mobility : Not available.

Conclusion/Summary : The product does not meet the criteria to be considered as a PMT or vPvM.

12.5 Results of PBT and vPvB assessment

Regulation (EC) No. 1907/2006 [REACH]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
titanium dioxide	No	No	No	No	No	No	No
2-(2-butoxyethoxy)ethanol	No	N/A	N/A	No	N/A	N/A	N/A
Dipropyleneglycolmethylether	No	N/A	N/A	No	N/A	N/A	N/A
Solvent naphtha (petroleum), light aromatic	No	N/A	No	No	No	N/A	No
3-Butoxypropan-2-ol	No	N/A	N/A	No	N/A	N/A	N/A
2-Butoxyethanol	No	N/A	N/A	No	N/A	N/A	N/A
2-Propenoic acid, 2-methyl-, polymer with ethyl 2-propenoate	No	N/A	N/A	No	N/A	N/A	N/A
Reaction mass of Bis (1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	N/A	N/A	N/A	Yes	N/A	N/A	N/A
2,4,7,9-tetramethyl-5-decyne-4,7-diol	No	N/A	N/A	No	N/A	N/A	N/A
1,2-benzisothiazol-3(2H)-one	No	N/A	No	No	No	N/A	No
pyrithione zinc	No	N/A	No	Yes	No	N/A	No
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	No	N/A	N/A	No	N/A	N/A	N/A

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

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
titanium dioxide	No	No	No	No	No	No	No
2-(2-butoxyethoxy)ethanol	No	No	No	No	No	No	No
Dipropyleneglycolmethylether	No	No	No	No	No	No	No
Solvent naphtha (petroleum), light aromatic	No	No	No	No	No	No	No
3-Butoxypropan-2-ol	No	No	No	No	No	No	No
2-Butoxyethanol	No	No	No	No	No	No	No
2-Propenoic acid, 2-methyl-, polymer with ethyl 2-propenoate	No	No	No	No	No	No	No
Reaction mass of Bis (1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	No	No	No	No	No	No	No
2,4,7,9-tetramethyl-5-decyne-4,7-diol	No	No	No	No	No	No	No
1,2-benzisothiazol-3(2H)-one	No	No	No	No	No	No	No
pyrithione zinc	No	No	No	No	No	No	No

SECTION 12: Ecological information

reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	No	No	No	No	No	No	No

Conclusion/Summary Regulation (EC) No. 1272/2008 [CLP] : The product does not meet the criteria to be considered as a PBT or vPvB.

12.6 Endocrine disrupting properties

Not available.

Conclusion/Summary [Product] : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

European waste catalogue (EWC) : 08.01.19

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	Not regulated.	9006	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	-	-
14.3 Transport hazard class(es)	-	9	-	-
14.4 Packing group	-	-	-	-

SECTION 14: Transport information

14.5 Environmental hazards	No.	Yes.	No.	No.

Additional information

ADN : The product is only regulated as a dangerous good when transported in tank vessels.

IATA : The environmentally hazardous substance mark may appear if required by other transportation regulations.

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Maritime transport in bulk according to IMO instruments : Not relevant/applicable due to nature of the product.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product/ingredient name	%	Designation [Usage]
AQUAFINE 8336-20 2-(2-butoxyethoxy)ethanol	≥90 ≤3	3 55 [Consumer paint]

Labelling :

Other EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

Explosive precursors : Not applicable.

Ozone depleting substances (EU 2024/590)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

National regulations

Austria

SECTION 15: Regulatory information

Limitation of the use of organic solvents : Permitted.

Belgium

Czech Republic

Storage code : IV

Denmark

Fire class : IV-1

Executive Order No. 1795/2015

Ingredient name	Annex I Section A	Annex I Section B
titanium dioxide	Listed	-

MAL-code : 1-1

Protection based on MAL : **According to the regulations on work involving coded products, the following stipulations apply to the use of personal protective equipment:**

General: Gloves must be worn for all work that may result in soiling. Apron/ coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. A face shield must be worn in work involving spattering if a full mask is not required. In this case, other recommended use of eye protection is not required.

In all spraying operations in which there is return spray, the following must be worn: respiratory protection and arm protectors/apron/coveralls/protective clothing as appropriate or as instructed.

MAL-code: 1-1
Application: During downtimes, cleaning and repair in closed facilities, spray booths or cabins, if there is a risk of contact with wet paint or organic solvents.

- Gas filter mask must be worn.

When spraying in existing* spray booths, if the operator is outside the spray zone.

- Full mask with combined filter and arm protectors must be worn.

During non-atomising spraying in existing* facilities of the combined-cabin, spray-cabin and spray-booth type where the operator is working inside the spray zone.

- Air-supplied half mask and eye protection must be worn.

During all spraying where atomisation occurs in cabins or spray booths where the operator is inside the spray zone and during spraying outside a closed facility, cabin or booth.

- Air-supplied half mask, eye protection, coveralls and hood must be worn.

Drying: Items for drying/drying ovens that are temporarily placed on such things as rack trolleys, etc, must be equipped with a mechanical exhaust system to prevent fumes from wet items from passing through workers' inhalation zone.

Polishing: When polishing treated surfaces, a mask with dust filter must be worn. When machine grinding, eye protection must be worn. Work gloves must always be worn.

Caution The regulations contain other stipulations in addition to the above.

*See Regulations.

SECTION 15: Regulatory information

Restrictions on use : Not to be used by professional users below 18 years of age. See the National Working Environment Authorities Executive Order regarding Young People At Work.

List of undesirable substances : Not listed

Carcinogenic waste : Waste containers must be labeled: Contains a substance or substances regulated by Danish working environment legislation on cancer risks.

Finland

France

Social Security Code, Articles L 461-1 to L 461-7 :

2-(2-butoxyethoxy)ethanol	RG 84
Dipropyleneglycolmethylether	RG 84
Solvent naphtha (petroleum), light aromatic	RG 84
3-Butoxypropan-2-ol	RG 84
2-Butoxyethanol	RG 84

Reinforced medical surveillance : Act of July 11, 1977 determining the list of activities which require reinforced medical surveillance: not applicable

Germany

Storage class (TRGS 510) : 10

Hazardous incident ordinance

This product is not controlled under the Germany Hazardous Incident Ordinance.

Hazard class for water : 3

Technical instruction on air quality control (TA Luft)

Number [Class]	Description	%
5.2.1 5.2.5 5.2.5 [I]	Total dust Organic substances Organic substances	43 9.1 5.4

AOX : The product contains organically bound halogens and can contribute to the AOX value in waste water.

Italy

D.Lgs. 152/06 : Not determined.

Netherlands

Ministry of Social Affairs and Employment (SZW) - Carcinogenic substances and processes, mutagenic or reprotoxic substances

Ingredient name	Carcinogen	Mutagen	Reproductive toxicity - Fertility	Reproductive toxicity - Development	Harmful via breastfeeding
Solvent naphtha (petroleum), light arom.	Listed	Listed	-	-	-

Water Discharge Policy (ABM) : Z(1) Non biodegradable substances with hazardous properties for humans and the environment (carcinogenicity/ mutagenicity/ reprotoxicity/ bioacumulative potential/ toxicity or persistence). Decontamination effort: Z

Norway

Sweden

Switzerland

VOC content : VOC (w/w): 6.5%

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

List name	Ingredient name	Status
Schedule III	Triethanolamine	Listed

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

SECTION 15: Regulatory information

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
N/A = Not available
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
SGG = Segregation Group
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Skin Sens. 1, H317	Calculation method
Aquatic Chronic 3, H412	Calculation method

Full text of abbreviated H statements

H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H360D	May damage the unborn child.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH071	Corrosive to the respiratory tract.

Full text of classifications [CLP/GHS]

SECTION 16: Other information

Acute Tox. 2	ACUTE TOXICITY - Category 2
Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Carc. 2	CARCINOGENICITY - Category 2
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Repr. 1B	REPRODUCTIVE TOXICITY - Category 1B
Repr. 2	REPRODUCTIVE TOXICITY - Category 2
Skin Corr. 1C	SKIN CORROSION/IRRITATION - Category 1C
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
Skin Sens. 1A	SKIN SENSITISATION - Category 1A
Skin Sens. 1B	SKIN SENSITISATION - Category 1B
STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

Date of issue/ Date of revision : 08/07/2025

Date of previous issue : No previous validation

Version : 2

AQUAFINE 8336-20 All variants

Notice to reader

The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.