SAFETY DATA SHEET

TROYSHIELD FF5

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

1.1 Product identifier

Product name : TROYSHIELD FF5

UFI : WNP0-40D0-F004-DFA7

Product code : 22290

Product description : Not available.

Product type : Liquid.

Other means of identification : Not available.

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

Machine cleaner for the metal-working industry

Identified uses

Not applicable.

Uses advised against

Not applicable.

1.3 Details of the supplier of the safety data sheet

TROY CHEMICAL COMPANY BV
Poortweg 4C
2612PA Delft
The Netherlands
Phone: + 31 (0) 10 899 0142

e-mail address of person responsible for this SDS : B.J. Vernooij, SDS Specialist (vernooib@troycorp.com)

1.4 Emergency telephone number

National advisory body/Poison Center

Austria: Vergiftungsinformationszentrale, 01/406 43 43	Belgium: Centre anti-poison/ Antigiftcentrum 070 245245	Czech Republic: 1.7 Nouzové telefonní číslo: Toxikologické informační středisko, Na Bojišti 1, 128 08 Praha 2: telefon (24 hodin/den) 224919293, 224915402, 224914575	Denmark: Giftinformation: +45 35 31 60 60	Estonia: Mürgistusteabekeskus: 16662 Hädaabinumber: 112	Finland: Myrkytyskeskus 09-471977 or 09 4711
France: ORFILA (INRS): + 33 (0)1 45 42 59 59	Germany: Giftnotrufzentrale Berlin: +49 030 - 192 40	Hungary: Egészségügyi Toxikológiai Tájékoztató Szolgálat (ETTSZ) 1096 Budapest, Nagyvárad tér 2. +36-80-201199 (ingyenes, éjjel-nappal) +36-1-4766464	Ireland: NPIC (8am to 10 pm daily): Phone 01-8092166	Italy: Ospedale Niguarda Cà Granda, Milan 0266101029	Lithuania: Poison centre: 236 20 52
Netherlands: NVIC (medical personnel, 24/7): Tel: 088 755 8000	Norway: Norwegian poison information center: 22 59 13 00	Poland: 112 (ogólny telefon alarmowy), 998 (straż pożarna), 999 (pogotowie medyczne); Ośrodki Informacji Toksykologicznej: +58 682 04 04 (Gdańsk), +12 411 99 99 (Kraków), +61 847 69 46 (Poznań), + 48 607 218 174 (Warszawa)	Slovakia: Slovensko: Národné toxikologické informačné centrum Limbova 5 833 05 Bratislava Tel. 02/5477 4166, 02/5477 4605 http://www.ntic.sk/ntic_en.php?adr=safetydata	Slovenia: Center za obveščanje 112	Portugal: Centro de Informação Antivenenos: +351 800 250 250
Sweden: 112	Switzerland: Schweizerisches Toxikologisches Informationszentrum: +41 - 1-145	Turkey: Not available.	United Kingdom (UK): NPIS 0870 600 6266	Spain: INSTITUTO NACIONAL DE TOXICOLOGÍA 91 562 04 20	Greece: Children's hospital "P. Kyriakou", Thivon & Levadias 1, GR 11527, Goudi, Athens Tel. +30 210 7793 777

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

Latvia: Valsts ugunsdzēsības un glābšanas dienests: 112, Toksikoloģijas un sepses klīnikas Saindēšanās un zāļu informācijas centrs, Hipokrāta 2, Rīga, Latvija, LV-1038; strādā 24 h diennaktī. Tel. nr. +371 67042473"	Croatia: Broj za izvanredna stanja: 112 Broj za medicinske informacije za Hrvatsku: 01 23 48 342 (Centar za kontrolu otrovanja)	Serbia: Broj telefona Nacionalnog centra za kontrola trovanja: ++381 11-662 381 (24 sata)	Bulgaria: Национален Токсикологичен Център (Токсикология Пирогов) - 02/9154409	Iceland: (+354) 543-2222	Romania: +40 21.318.36.06 (Disponibil in intervalul orar 8.00 – 16.00), Birou RSI si Informare Toxicologica din cadrul INSP, Str. D.Leonte Nr. 1-3, Bucuresti, Romania
Luxembourg: Centre Antipoisons / Giftinformationszentrum, Tel.: (+352) 8002 5500)	Cyprus: 1401	Malta: Medicines and Poisons Information Service at Mater Dei Hospital (MDH) +356 2545 6508 Emergency number: 112			

Supplier

Emergency telephone number (24/7) : +1 703-741-5970 (EN)

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 Corr. 1B, H314
Eye Dam. 1, H318
Skin Sens. 1, H317
Aquatic Chronic 3, H412

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

Ingredients of unknown toxicity : 3.8 percent of the mixture consists of component(s) of unknown acute oral toxicity
3.8 percent of the mixture consists of component(s) of unknown acute dermal toxicity
3.8 percent of the mixture consists of component(s) of unknown acute inhalation toxicity

Ingredients of unknown ecotoxicity : Contains 3.8% of components with unknown hazards to the aquatic environment

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 : Danger

Hazard statements : Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
Harmful to aquatic life with long lasting effects.

Precautionary statements

General : Not applicable.

Prevention : Wear protective gloves, protective clothing and eye or face protection. Avoid release to the environment. Avoid breathing vapor.

Response : IF INHALED: Immediately call a POISON CENTER or doctor. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor. Wash contaminated clothing before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

SECTION 2: Hazards identification

Storage : Not applicable.

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

Hazardous ingredients : 2-phenoxyethanol
Potassium hydroxide
2-aminoethanol
1,2-benzisothiazol-3(2H)-one

Supplemental label elements : Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : Not applicable.

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
Alkylethercarbonsäuren aminneutralisiert	CAS: 105391-15-9/ 107600-33-9/ 102-71-6	≤5	Skin Irrit. 2, H315 Eye Irrit. 2, H319	-	[1]
2-phenoxyethanol	REACH #: Biocide EC: 204-589-7 CAS: 122-99-6 Index: 603-098-00-9	3	Acute Tox. 4, H302 Eye Dam. 1, H318 STOT SE 3, H335	ATE [Oral] = 1394 mg/kg	[1] [2]
2-phenylphenol (ISO)	REACH #: Biocide EC: 201-993-5 CAS: 90-43-7 Index: 604-020-00-6	2.282	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Acute] = 1 M [Chronic] = 1	[1]
2,2',2''-nitrilotriethanol	REACH #: 01-2119486482-31 EC: 203-049-8 CAS: 102-71-6	≤3	Not classified.	-	[2]
2-(2-Butoxyethoxy)ethanol.	REACH #:	≤3	Eye Irrit. 2, H319	-	[1] [2]

SECTION 3: Composition/information on ingredients

	01-2119475104-44 EC: 203-961-6 CAS: 112-34-5 Index: 603-096-00-8				
Potassium hydroxide	REACH #: 01-2119487136-33 EC: 215-181-3 CAS: 1310-58-3 Index: 019-002-00-8	≤3	Met. Corr. 1, H290 Acute Tox. 4, H302 Skin Corr. 1A, H314 Eye Dam. 1, H318	ATE [Oral] = 333 mg/kg Skin Corr. 1A, H314: C ≥ 5% Skin Corr. 1B, H314: 2% ≤ C < 5% Skin Irrit. 2, H315: 0.5% ≤ C < 2% Eye Dam. 1, H318: C ≥ 2% Eye Irrit. 2, H319: 0.5% ≤ C < 2%	[1]
2-aminoethanol	REACH #: 01-2119486455-28 EC: 205-483-3 CAS: 141-43-5 Index: 603-030-00-8	≤2.6	Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Chronic 3, H412	ATE [Oral] = 1089 mg/kg ATE [Dermal] = 1100 mg/kg ATE [Inhalation (vapours)] = 11 mg/l STOT SE 3, H335: C ≥ 5%	[1] [2]
1,2-benzisothiazol-3(2H)-one	REACH #: Biocide EC: 220-120-9 CAS: 2634-33-5 Index: 613-088-00-6	0.34	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400 **See Section 16 for the full text of the H statements declared above.**	ATE [Oral] = 597 mg/kg Skin Sens. 1, H317: C ≥ 0.05% M [Acute] = 1	[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

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

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.

Inhalation : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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. 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. In case of inhalation of decomposition products in a fire,

SECTION 4: First aid measures

symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. 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. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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 : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

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. Warehousing: All materials except Oxidizers can be extinguished by replacing the available air with CO2 when a stationary CO2 installation is installed.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

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.

SECTION 5: Firefighting measures

Hazardous combustion products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
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 spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized 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 spilled 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 materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry 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 release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

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 breathe vapor or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from acids. 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. Store locked up. Separate from acids. 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 unlabeled 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.	**EU OEL (Europe, 2/2017). Notes: list of indicative occupational exposure limit values** STEL: 101.2 mg/m³ 15 minutes. STEL: 15 ppm 15 minutes. TWA: 67.5 mg/m³ 8 hours. TWA: 10 ppm 8 hours.
2-aminoethanol	**EU OEL (Europe, 2/2017). Absorbed through skin. Notes: list of indicative occupational exposure limit values** STEL: 7.6 mg/m³ 15 minutes. STEL: 3 ppm 15 minutes. TWA: 2.5 mg/m³ 8 hours. TWA: 1 ppm 8 hours.

Occupational exposure limits

SECTION 8: Exposure controls/personal protection

Product/ingredient name	Exposure limit values
Europe	
2-(2-Butoxyethoxy)ethanol.	**EU OEL (Europe, 2/2017). Notes: list of indicative occupational exposure limit values** STEL: 101.2 mg/m³ 15 minutes. STEL: 15 ppm 15 minutes. TWA: 67.5 mg/m³ 8 hours. TWA: 10 ppm 8 hours.
2-aminoethanol	**EU OEL (Europe, 2/2017). Absorbed through skin. Notes: list of indicative occupational exposure limit values** STEL: 7.6 mg/m³ 15 minutes. STEL: 3 ppm 15 minutes. TWA: 2.5 mg/m³ 8 hours. TWA: 1 ppm 8 hours.
Austria	
2-phenoxyethanol	**Regulation on Limit Values - MAC (Austria, 9/2018). Absorbed through skin.** CEIL: 110 mg/m³ 15 minutes. Form: All forms CEIL: 20 ppm 15 minutes. Form: All forms TWA: 110 mg/m³ 8 hours. Form: All forms TWA: 20 ppm 8 hours. Form: All forms
2,2',2"-nitrilotriethanol	**Regulation on Limit Values - MAC (Austria, 9/2018). Sensitization potential.** TWA: 5 mg/m³ 8 hours. Form: inhalable fraction PEAK: 10 mg/m³, 4 times per shift, 15 minutes. Form: inhalable fraction TWA: 0.8 ppm 8 hours. PEAK: 1.6 ppm, 4 times per shift, 15 minutes.
2-(2-Butoxyethoxy)ethanol.	**Regulation on Limit Values - MAC (Austria, 9/2018).** PEAK: 101.2 mg/m³, 4 times per shift, 15 minutes. PEAK: 15 ppm, 4 times per shift, 15 minutes. TWA: 67.5 mg/m³ 8 hours. TWA: 10 ppm 8 hours.
Potassium hydroxide	**Regulation on Limit Values - MAC (Austria, 9/2018).** TWA: 2 mg/m³ 8 hours. Form: inhalable fraction
2-aminoethanol	**Regulation on Limit Values - MAC (Austria, 9/2018). Skin sensitizer.** PEAK: 7.6 mg/m³, 4 times per shift, 15 minutes. PEAK: 3 ppm, 4 times per shift, 15 minutes. TWA: 2.5 mg/m³ 8 hours. TWA: 1 ppm 8 hours.
Belgium	
2,2',2"-nitrilotriethanol	**Limit values (Belgium, 10/2018).** TWA: 5 mg/m³ 8 hours.
2-(2-Butoxyethoxy)ethanol.	**Limit values (Belgium, 10/2018).** STEL: 15 ppm 15 minutes. TWA: 10 ppm 8 hours. TWA: 67.5 mg/m³ 8 hours. STEL: 101.2 mg/m³ 15 minutes.
Potassium hydroxide	**Limit values (Belgium, 10/2018).** M: 2 mg/m³
2-aminoethanol	**Limit values (Belgium, 10/2018). Absorbed through skin.** STEL: 7.6 mg/m³ 15 minutes. STEL: 3 ppm 15 minutes. TWA: 2.5 mg/m³ 8 hours. TWA: 1 ppm 8 hours.
Bulgaria	

SECTION 8: Exposure controls/personal protection

2-(2-Butoxyethoxy)ethanol.	**Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 9/2018).** Limit value 8 hours: 67.5 mg/m³ 8 hours. Limit value 15 min: 101.2 mg/m³ 15 minutes. Limit value 15 min: 15 ppm 15 minutes. Limit value 8 hours: 10 ppm 8 hours.
Potassium hydroxide	**Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 9/2018).** Limit value 8 hours: 2 mg/m³ 8 hours.
2-aminoethanol	**Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 9/2018). Absorbed through skin.** Limit value 8 hours: 2.5 mg/m³ 8 hours. Limit value 15 min: 7.6 mg/m³ 15 minutes. Limit value 8 hours: 1 ppm 8 hours. Limit value 15 min: 3 ppm 15 minutes.
Croatia	
2-(2-Butoxyethoxy)ethanol.	**Ministry of Economy, Labour and Entrepreneurship ELV/ STELV (Croatia, 6/2016).** STELV: 101.2 mg/m³ 15 minutes. STELV: 15 ppm 15 minutes. ELV: 67.5 mg/m³ 8 hours. ELV: 10 ppm 8 hours.
Potassium hydroxide	**Ministry of Economy, Labour and Entrepreneurship ELV/ STELV (Croatia, 10/2018).** STELV: 2 mg/m³ 15 minutes.
2-aminoethanol	**Ministry of Economy, Labour and Entrepreneurship ELV/ STELV (Croatia, 6/2016). Absorbed through skin.** STELV: 7.6 mg/m³ 15 minutes. STELV: 3 ppm 15 minutes. ELV: 2.5 mg/m³ 8 hours. ELV: 1 ppm 8 hours.
Czech Republic	
2,2',2''-nitrilotriethanol	**Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 10/2018). Absorbed through skin.** TWA: 5 mg/m³ 8 hours. TWA: 0.82 ppm 8 hours. STEL: 10 mg/m³ 15 minutes. STEL: 1.64 ppm 15 minutes.
2-(2-Butoxyethoxy)ethanol.	**Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 1/2016).** STEL: 100 mg/m³ 15 minutes. STEL: 15.1 ppm 15 minutes. TWA: 70 mg/m³ 8 hours. TWA: 10.57 ppm 8 hours.
Potassium hydroxide	**Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 10/2018).** TWA: 1 mg/m³ 8 hours. STEL: 2 mg/m³ 15 minutes.
2-aminoethanol	**Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 1/2016). Absorbed through skin.** STEL: 7.5 mg/m³ 15 minutes. STEL: 3.0075 ppm 15 minutes. TWA: 2.5 mg/m³ 8 hours. TWA: 1.0025 ppm 8 hours.
Denmark	

SECTION 8: Exposure controls/personal protection

2,2',2''-nitrilotriethanol	**Working Environment Authority (Denmark, 5/2018).** TWA: 0.5 ppm 8 hours. TWA: 3.1 mg/m³ 8 hours.
2-(2-Butoxyethoxy)ethanol.	**Working Environment Authority (Denmark, 5/2018).** TWA: 68 mg/m³ 8 hours. TWA: 10 ppm 8 hours.
Potassium hydroxide	**Working Environment Authority (Denmark, 5/2018).** CEIL: 2 mg/m³
2-aminoethanol	**Working Environment Authority (Denmark, 5/2018). Absorbed through skin.** TWA: 2.5 mg/m³ 8 hours. TWA: 1 ppm 8 hours.
Estonia	
2,2',2''-nitrilotriethanol	**Occupational exposure limits, Regulation No. 293 (Estonia, 10/2019). Skin sensitizer.** TWA: 5 mg/m³ 8 hours. STEL: 10 mg/m³ 15 minutes.
2-(2-Butoxyethoxy)ethanol.	**Occupational exposure limits, Regulation No. 293 (Estonia, 3/2018).** TWA: 10 ppm 8 hours. TWA: 67.5 mg/m³ 8 hours.
Potassium hydroxide	**Occupational exposure limits, Regulation No. 293 (Estonia, 10/2019).** TWA: 2 mg/m³ 8 hours.
2-aminoethanol	**Occupational exposure limits, Regulation No. 293 (Estonia, 3/2018). Absorbed through skin.** STEL: 7.6 mg/m³ 15 minutes. STEL: 3 ppm 15 minutes. TWA: 2.5 mg/m³ 8 hours. TWA: 1 ppm 8 hours.
Finland	
2-phenoxyethanol	**Institute of Occupational Health, Ministry of Social Affairs (Finland, 12/2019). Absorbed through skin.** STEL: 290 mg/m³ 15 minutes. Form: All forms STEL: 50 ppm 15 minutes. Form: All forms TWA: 110 mg/m³ 8 hours. Form: All forms TWA: 20 ppm 8 hours. Form: All forms
2,2',2''-nitrilotriethanol	**Institute of Occupational Health, Ministry of Social Affairs (Finland, 12/2019).** TWA: 5 mg/m³ 8 hours.
2-(2-Butoxyethoxy)ethanol.	**Institute of Occupational Health, Ministry of Social Affairs (Finland, 6/2018).** TWA: 10 ppm 8 hours. TWA: 68 mg/m³ 8 hours.
Potassium hydroxide	**Institute of Occupational Health, Ministry of Social Affairs (Finland, 12/2019).** CEIL: 2 mg/m³
2-aminoethanol	**Institute of Occupational Health, Ministry of Social Affairs (Finland, 6/2018). Absorbed through skin.** STEL: 7.6 mg/m³ 15 minutes. STEL: 3 ppm 15 minutes. TWA: 2.5 mg/m³ 8 hours. TWA: 1 ppm 8 hours.
France	

SECTION 8: Exposure controls/personal protection

2-(2-Butoxyethoxy)ethanol.	**Ministry of Labor (France, 10/2016). Notes: Labour Act, Art. 4412-150 (Regulatory indicative exposure limits)** STEL: 101.2 mg/m³ 15 minutes. STEL: 15 ppm 15 minutes. TWA: 67.5 mg/m³ 8 hours. TWA: 10 ppm 8 hours.
Potassium hydroxide	**Ministry of Labor (France, 9/2019). Notes: Ministry of Labour (Brochure INRS Ed 984, July 2012). Indicative exposure limits** STEL: 2 mg/m³ 15 minutes.
2-aminoethanol	**Ministry of Labor (France, 10/2016). Absorbed through skin. Notes: Labour Act , Art 4412-149 (Regulatory binding exposure limits)** TWA: 2.5 mg/m³ 8 hours. TWA: 1 ppm 8 hours. STEL: 7.6 mg/m³ 15 minutes. STEL: 3 ppm 15 minutes.
Germany	
2-phenoxyethanol	**DFG MAC-values list (Germany, 7/2019). Absorbed through skin.** PEAK: 5.7 mg/m³, 4 times per shift, 15 minutes. Form: All forms PEAK: 1 ppm, 4 times per shift, 15 minutes. Form: All forms TWA: 5.7 mg/m³ 8 hours. Form: All forms TWA: 1 ppm 8 hours. Form: All forms **TRGS 900 OEL (Germany, 3/2019).** PEAK: 5.7 mg/m³ 15 minutes. Form: All forms PEAK: 1 ppm 15 minutes. Form: All forms TWA: 5.7 mg/m³ 8 hours. Form: All forms TWA: 1 ppm 8 hours. Form: All forms
2-phenylphenol (ISO)	**DFG MAC-values list (Germany, 7/2018).** TWA: 5 mg/m³ 8 hours. Form: inhalable fraction PEAK: 5 mg/m³, 4 times per shift, 15 minutes. Form: inhalable fraction **TRGS 900 OEL (Germany, 6/2018).** PEAK: 5 mg/m³ 15 minutes. Form: inhalable fraction TWA: 5 mg/m³ 8 hours. Form: inhalable fraction
2,2',2''-nitrilotriethanol	**DFG MAC-values list (Germany, 7/2019).** TWA: 1 mg/m³ 8 hours. Form: inhalable fraction PEAK: 1 mg/m³, 4 times per shift, 15 minutes. Form: inhalable fraction **TRGS 900 OEL (Germany, 3/2019).** PEAK: 1 mg/m³ 15 minutes. Form: inhalable fraction TWA: 1 mg/m³ 8 hours. Form: inhalable fraction
2-(2-Butoxyethoxy)ethanol.	**DFG MAC-values list (Germany, 7/2018).** PEAK: 100.5 mg/m³, 4 times per shift, 15 minutes. TWA: 67 mg/m³ 8 hours. TWA: 10 ppm 8 hours. PEAK: 15 ppm, 4 times per shift, 15 minutes. **TRGS 900 OEL (Germany, 6/2018).** PEAK: 100.5 mg/m³ 15 minutes. TWA: 67 mg/m³ 8 hours. TWA: 10 ppm 8 hours. PEAK: 15 ppm 15 minutes.
2-aminoethanol	**DFG MAC-values list (Germany, 7/2018). Skin sensitizer.** PEAK: 0.51 mg/m³, 4 times per shift, 15 minutes. PEAK: 0.2 ppm, 4 times per shift, 15 minutes. TWA: 0.51 mg/m³ 8 hours. TWA: 0.2 ppm 8 hours. **TRGS 900 OEL (Germany, 6/2018). Skin sensitizer.** PEAK: 0.5 mg/m³ 15 minutes.

SECTION 8: Exposure controls/personal protection

	PEAK: 0.2 ppm 15 minutes. TWA: 0.5 mg/m³ 8 hours. TWA: 0.2 ppm 8 hours.
1,2-benzisothiazol-3(2H)-one	**DFG MAC-values list (Germany, 10/2021). Skin sensitizer.**
Greece	
2-(2-Butoxyethoxy)ethanol.	**Ministry of Labour and Social Affairs (Greece, 8/2018).** STEL: 101.2 mg/m³ 15 minutes. STEL: 15 ppm 15 minutes. TWA: 67.5 mg/m³ 8 hours. TWA: 10 ppm 8 hours.
Potassium hydroxide	**Ministry of Labour and Social Affairs (Greece, 8/2018).** TWA: 2 mg/m³ 8 hours. STEL: 2 mg/m³ 15 minutes.
2-aminoethanol	**Ministry of Labour and Social Affairs (Greece, 8/2018). Absorbed through skin.** STEL: 7.6 mg/m³ 15 minutes. STEL: 3 ppm 15 minutes. TWA: 2.5 mg/m³ 8 hours. TWA: 1 ppm 8 hours.
Hungary	
2-(2-Butoxyethoxy)ethanol.	**5/2020. (II. 6.) ITM Decree (Hungary, 8/2018).** TWA: 67.5 mg/m³ 8 hours. PEAK: 101.2 mg/m³ 15 minutes.
Potassium hydroxide	**5/2020. (II. 6.) ITM Decree (Hungary, 8/2018).** TWA: 2 mg/m³ 8 hours. PEAK: 2 mg/m³ 15 minutes.
2-aminoethanol	**5/2020. (II. 6.) ITM Decree (Hungary, 8/2018). Absorbed through skin.** TWA: 2.5 mg/m³ 8 hours. PEAK: 7.6 mg/m³ 15 minutes.
Ireland	
2,2',2''-nitrilotriethanol	**NAOSH (Ireland, 8/2018).** OELV-8hr: 5 mg/m³ 8 hours.
2-(2-Butoxyethoxy)ethanol.	**NAOSH (Ireland, 8/2018).** OELV-8hr: 10 ppm 8 hours. OELV-15min: 101.2 mg/m³ 15 minutes. OELV-8hr: 67.5 mg/m³ 8 hours. OELV-15min: 15 ppm 15 minutes.
Potassium hydroxide	**NAOSH (Ireland, 8/2018).** OELV-15min: 2 mg/m³ 15 minutes.
2-aminoethanol	**NAOSH (Ireland, 8/2018). Absorbed through skin.** OELV-15min: 7.6 mg/m³ 15 minutes. OELV-15min: 3 ppm 15 minutes. OELV-8hr: 2.5 mg/m³ 8 hours. OELV-8hr: 1 ppm 8 hours.
Italy	
2-(2-Butoxyethoxy)ethanol.	**Ministry of Labour and Social Policy (Italy, 10/2013).** 8 hours: 10 ppm 8 hours. 8 hours: 67.5 mg/m³ 8 hours. Short Term: 15 ppm 15 minutes. Short Term: 101.2 mg/m³ 15 minutes.
2-aminoethanol	**Ministry of Labour and Social Policy (Italy, 10/2013). Absorbed through skin.** 8 hours: 1 ppm 8 hours. 8 hours: 2.5 mg/m³ 8 hours. Short Term: 3 ppm 15 minutes. Short Term: 7.6 mg/m³ 15 minutes.

SECTION 8: Exposure controls/personal protection

Latvia	
2-(2-Butoxyethoxy)ethanol.	**Ministers Cabinet Regulations Nr.325 - AER (Latvia, 7/2018).** STEL: 101.2 mg/m³ 15 minutes. TWA: 10 ppm 8 hours. STEL: 15 ppm 15 minutes. TWA: 67.5 mg/m³ 8 hours.
2-aminoethanol	**Ministers Cabinet Regulations Nr.325 - AER (Latvia, 7/2018). Absorbed through skin.** TWA: 0.5 mg/m³ 8 hours. TWA: 0.2 ppm 8 hours. STEL: 3 ppm 15 minutes. STEL: 7.6 mg/m³ 15 minutes.
Lithuania	
2,2',2"-nitrilotriethanol	**Lithuanian Hygiene Standard HN 23 (Lithuania, 10/2019). Skin sensitizer.** TWA: 5 mg/m³ 8 hours. STEL: 10 mg/m³ 15 minutes.
2-(2-Butoxyethoxy)ethanol.	**Lithuanian Hygiene Standard HN 23 (Lithuania, 8/2018).** STEL: 101.2 mg/m³ 15 minutes. STEL: 15 ppm 15 minutes. TWA: 67.5 mg/m³ 8 hours. TWA: 10 ppm 8 hours.
2-aminoethanol	**Lithuanian Hygiene Standard HN 23 (Lithuania, 8/2018). Absorbed through skin.** STEL: 7.6 mg/m³ 15 minutes. STEL: 3 ppm 15 minutes. TWA: 2.5 mg/m³ 8 hours. TWA: 1 ppm 8 hours.
Netherlands	
2-(2-Butoxyethoxy)ethanol.	**Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 7/2018). Absorbed through skin. Notes: Legal indicates a statutory value, Admini¬strative indicates an administrative value that is not legally binding (see background).** OEL, 8-h TWA: 50 mg/m³ 8 hours. **Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 7/2018). Absorbed through skin.** STEL,15-min: 100 mg/m³ 15 minutes.
2-aminoethanol	**Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 7/2018). Absorbed through skin. Notes: Administrative** STEL,15-min: 7.6 mg/m³ 15 minutes. OEL, 8-h TWA: 2.5 mg/m³ 8 hours.
Norway	
2,2',2"-nitrilotriethanol	**FOR-2011-12-06-1358 (Norway, 9/2018).** TWA: 5 mg/m³ 8 hours.
2-(2-Butoxyethoxy)ethanol.	**FOR-2011-12-06-1358 (Norway, 9/2018).** TWA: 10 ppm 8 hours. TWA: 68 mg/m³ 8 hours.
Potassium hydroxide	**FOR-2011-12-06-1358 (Norway, 9/2018).** CEIL: 2 mg/m³
2-aminoethanol	**FOR-2011-12-06-1358 (Norway, 9/2018). Absorbed through skin.** TWA: 2.5 mg/m³ 8 hours. TWA: 1 ppm 8 hours.
Poland	

SECTION 8: Exposure controls/personal protection

2-phenoxyethanol	**Regulation of the Minister of Family, Labor and Social Policy of 18 February 2021, regarding the highest permissible concentrations and values of agents harmful to health in the work environment (Journal of Laws 2021, item 325) (Poland, 7/2018).** TWA: 230 mg/m³ 8 hours.
2-(2-Butoxyethoxy)ethanol.	**Regulation of the Minister of Family, Labor and Social Policy of 18 February 2021, regarding the highest permissible concentrations and values of agents harmful to health in the work environment (Journal of Laws 2021, item 325) (Poland, 7/2018).** TWA: 67 mg/m³ 8 hours. STEL: 100 mg/m³ 15 minutes.
Potassium hydroxide	**Regulation of the Minister of Family, Labor and Social Policy of 18 February 2021, regarding the highest permissible concentrations and values of agents harmful to health in the work environment (Journal of Laws 2021, item 325) (Poland, 7/2018).** TWA: 0.5 mg/m³ 8 hours. STEL: 1 mg/m³ 15 minutes.
2-aminoethanol	**Regulation of the Minister of Family, Labor and Social Policy of 18 February 2021, regarding the highest permissible concentrations and values of agents harmful to health in the work environment (Journal of Laws 2021, item 325) (Poland, 7/2018). Absorbed through skin.** STEL: 7.5 mg/m³ 15 minutes. TWA: 2.5 mg/m³ 8 hours.
Portugal	
2,2',2''-nitrilotriethanol	**Portuguese Institute of Quality (Portugal, 11/2014).** TWA: 5 mg/m³ 8 hours.
2-(2-Butoxyethoxy)ethanol.	**Portuguese Institute of Quality (Portugal, 11/2014).** TWA: 10 ppm 8 hours. Form: inhalable vapour and aerosols
Potassium hydroxide	**Portuguese Institute of Quality (Portugal, 11/2014).** CEIL: 2 mg/m³
2-aminoethanol	**Portuguese Institute of Quality (Portugal, 11/2014).** STEL: 6 ppm 15 minutes. TWA: 3 ppm 8 hours.
Romania	
2-(2-Butoxyethoxy)ethanol.	**HG 1218/2006 with subsequent modifications and additions (Romania, 8/2018).** VLA: 67.5 mg/m³ 8 hours. Short term: 101.2 mg/m³ 15 minutes. Short term: 15 ppm 15 minutes. VLA: 10 ppm 8 hours.
Potassium hydroxide	**HG 1218/2006 with subsequent modifications and additions (Romania, 8/2018).** VLA: 1 mg/m³, (expressed as sodium hydroxide) 8 hours. Short term: 3 mg/m³, (expressed as sodium hydroxide) 15 minutes.
2-aminoethanol	**HG 1218/2006 with subsequent modifications and additions (Romania, 8/2018). Absorbed through skin.** VLA: 2.5 mg/m³ 8 hours. VLA: 1 ppm 8 hours. Short term: 7.6 mg/m³ 15 minutes. Short term: 3 ppm 15 minutes.
Slovakia	

SECTION 8: Exposure controls/personal protection

2-(2-Butoxyethoxy)ethanol.	**Government regulation SR c. 356/2006 (Slovakia, 2/2018).** STEL: 101.2 mg/m³ 15 minutes. TWA: 67.5 mg/m³ 8 hours. TWA: 10 ppm 8 hours. STEL: 15 ppm 15 minutes.
2-aminoethanol	**Government regulation SR c. 356/2006 (Slovakia, 2/2018). Absorbed through skin.** STEL: 7.6 mg/m³ 15 minutes. TWA: 2.5 mg/m³ 8 hours. TWA: 1 ppm 8 hours. STEL: 3 ppm 15 minutes.
Slovenia	
2-phenoxyethanol	**Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 12/2019). Absorbed through skin.** TWA: 5.7 mg/m³ 8 hours. TWA: 1 ppm 8 hours. KTV: 5.7 mg/m³, 4 times per shift, 15 minutes. KTV: 1 ppm, 4 times per shift, 15 minutes.
2-(2-Butoxyethoxy)ethanol.	**Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 6/2015).** TWA: 67.5 mg/m³ 8 hours. TWA: 10 ppm 8 hours. KTV: 101.25 mg/m³, 4 times per shift, 15 minutes. KTV: 15 ppm, 4 times per shift, 15 minutes.
2-aminoethanol	**Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 6/2015). Absorbed through skin.** TWA: 2.5 mg/m³ 8 hours. TWA: 1 ppm 8 hours. KTV: 7.5 mg/m³, 4 times per shift, 15 minutes. KTV: 3 ppm, 4 times per shift, 15 minutes.
Spain	
2,2',2''-nitrilotriethanol	**National institute of occupational safety and health (Spain, 2/2019).** TWA: 5 mg/m³ 8 hours.
2-(2-Butoxyethoxy)ethanol.	**National institute of occupational safety and health (Spain, 2/2018).** TWA: 67.5 mg/m³ 8 hours. TWA: 10 ppm 8 hours. STEL: 15 ppm 15 minutes. STEL: 101.2 mg/m³ 15 minutes.
Potassium hydroxide	**National institute of occupational safety and health (Spain, 2/2019).** STEL: 2 mg/m³ 15 minutes.
2-aminoethanol	**National institute of occupational safety and health (Spain, 2/2018). Absorbed through skin.** STEL: 7.5 mg/m³ 15 minutes. STEL: 3 ppm 15 minutes. TWA: 2.5 mg/m³ 8 hours. TWA: 1 ppm 8 hours.
Sweden	

SECTION 8: Exposure controls/personal protection

2,2',2"-nitrilotriethanol	**Work environment authority Regulation 2018:1 (Sweden, 2/2018). Absorbed through skin.** TWA: 5 mg/m³ 8 hours. STEL: 10 mg/m³ 15 minutes. STEL: 1.6 ppm 15 minutes. TWA: 0.8 ppm 8 hours.
2-(2-Butoxyethoxy)ethanol.	**Work environment authority Regulation 2018:1 (Sweden, 2/2018).** STEL: 101 mg/m³ 15 minutes. STEL: 15 ppm 15 minutes. TWA: 68 mg/m³ 8 hours. TWA: 10 ppm 8 hours.
Potassium hydroxide	**Work environment authority Regulation 2018:1 (Sweden, 2/2018).** TWA: 1 mg/m³ 8 hours. Form: inhalable fraction STEL: 2 mg/m³ 15 minutes. Form: inhalable fraction
2-aminoethanol	**Work environment authority Regulation 2018:1 (Sweden, 2/2018). Absorbed through skin.** STEL: 7.5 mg/m³ 15 minutes. STEL: 3 ppm 15 minutes. TWA: 2.5 mg/m³ 8 hours. TWA: 1 ppm 8 hours.
Switzerland	
2-phenoxyethanol	**SUVA (Switzerland, 7/2019). Notes: definitive Festlegung** STEL: 110 mg/m³ 15 minutes. Form: vapour and aerosols STEL: 20 ppm 15 minutes. Form: vapour and aerosols TWA: 110 mg/m³ 8 hours. Form: vapour and aerosols TWA: 20 ppm 8 hours. Form: vapour and aerosols
2,2',2"-nitrilotriethanol	**SUVA (Switzerland, 7/2019).** STEL: 5 mg/m³ 15 minutes. Form: Inhalable fraction TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction
2-(2-Butoxyethoxy)ethanol.	**SUVA (Switzerland, 1/2018). Notes: not temporary** STEL: 101 mg/m³ 15 minutes. Form: vapour and aerosols TWA: 67 mg/m³ 8 hours. Form: vapour and aerosols **SUVA (Switzerland, 1/2018).** STEL: 15 ppm 15 minutes. Form: vapour and aerosols TWA: 10 ppm 8 hours. Form: vapour and aerosols
Potassium hydroxide	**SUVA (Switzerland, 7/2019).** TWA: 2 mg/m³ 8 hours. Form: Inhalable fraction
2-aminoethanol	**SUVA (Switzerland, 1/2018). Skin sensitizer. Notes: not temporary** STEL: 10 mg/m³ 15 minutes. Form: vapour and aerosols STEL: 4 ppm 15 minutes. Form: vapour and aerosols TWA: 5 mg/m³ 8 hours. Form: vapour and aerosols TWA: 2 ppm 8 hours. Form: vapour and aerosols
Turkey	
2,2',2"-nitrilotriethanol	**ACGIH TLV (United States, 3/2019).** TWA: 5 mg/m³ 8 hours.
2-(2-Butoxyethoxy)ethanol.	**TR ISGGM OEL (Turkey, 12/2013).** TWA: 67.5 mg/m³ 8 hours. TWA: 10 ppm 8 hours. STEL: 101.2 mg/m³ 15 minutes. STEL: 15 ppm 15 minutes.
Potassium hydroxide	**ACGIH TLV (United States, 3/2019).** C: 2 mg/m³
2-aminoethanol	**TR ISGGM OEL (Turkey, 12/2013). Absorbed through skin.** TWA: 2.5 mg/m³ 8 hours. TWA: 1 ppm 8 hours. STEL: 7.6 mg/m³ 15 minutes.

SECTION 8: Exposure controls/personal protection

	STEL: 3 ppm 15 minutes.
United Kingdom (UK)	
2-(2-Butoxyethoxy)ethanol.	**EH40/2005 WELs (United Kingdom (UK), 8/2018).** TWA: 10 ppm 8 hours. STEL: 15 ppm 15 minutes. TWA: 67.5 mg/m³ 8 hours. STEL: 101.2 mg/m³ 15 minutes.
Potassium hydroxide	**EH40/2005 WELs (United Kingdom (UK), 8/2018).** STEL: 2 mg/m³ 15 minutes.
2-aminoethanol	**EH40/2005 WELs (United Kingdom (UK), 8/2018). Absorbed through skin.** STEL: 7.6 mg/m³ 15 minutes. STEL: 3 ppm 15 minutes. TWA: 2.5 mg/m³ 8 hours. TWA: 1 ppm 8 hours.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. 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	Type	Exposure	Value	Population	Effects
2-phenoxyethanol	DNEL	Long term Inhalation	8.07 mg/m³	Workers	Systemic
	DNEL	Long term Inhalation	8.07 mg/m³	Workers	Local
	DNEL	Long term Inhalation	2.5 mg/m³	General population [Consumers]	Local
	DNEL	Short term Inhalation	2.5 mg/m³	General population [Consumers]	Local
	DNEL	Long term Dermal	20.83 mg/kg	General population [Consumers]	Systemic
	DNEL	Long term Oral	17.43 mg/kg	General population [Consumers]	Systemic
2-phenylphenol (ISO)	DNEL	Long term Oral	0.4 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Inhalation	19.25 mg/m³	Workers	Systemic
	DNEL	Long term Inhalation	1.2 mg/m³	General population [Consumers]	Systemic
	DNEL	Long term Dermal	0.4 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Dermal	21.84 mg/	Workers	Systemic

SECTION 8: Exposure controls/personal protection

			kg bw/day		
2-(2-Butoxyethoxy)ethanol.	DNEL	Long term Oral	5 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Short term Dermal	89 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	50 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Dermal	83 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	40.5 mg/m³	General population [Consumers]	Systemic
	DNEL	Long term Inhalation	67.5 mg/m³	Workers	Systemic
	DNEL	Short term Inhalation	101.2 mg/m³	Workers	Local
	DNEL	Short term Inhalation	60.7 mg/m³	General population [Consumers]	Local
	DNEL	Long term Inhalation	60.7 mg/m³	General population [Consumers]	Local
	DNEL	Long term Inhalation	67.5 mg/m³	Workers	Local
Potassium hydroxide	DNEL	Long term Inhalation	1 mg/m³	Workers	Local
	DNEL	Long term Inhalation	1 mg/m³	General population [Consumers]	Local
	DNEL	Long term Inhalation	1 mg/m³	General population	Local
	DNEL	Long term Inhalation	1 mg/m³	Workers	Local
2-aminoethanol	DNEL	Long term Dermal	1 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	3.3 mg/m³	Workers	Local
	DNEL	Long term Oral	3.75 mg/kg bw/day	General population [Consumers]	Local
	DNEL	Long term Dermal	0.24 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Inhalation	2 mg/m³	General population [Consumers]	Local

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
2-phenoxyethanol	Fresh water	0.943 mg/l	-
	Marine water	0.0943 mg/l	-
	Fresh water sediment	7.2366 mg/kg	-
	Marine water sediment	0.72366 mg/kg	-
	Soil	1.26 mg/kg	-
	Sewage Treatment Plant	24.8 mg/kg	-
2-phenylphenol (ISO)	Soil	2.5 mg/kg dwt	Assessment Factors
	Sewage Treatment Plant	0.56 mg/l	Assessment Factors

SECTION 8: Exposure controls/personal protection

	Marine water sediment	0.01284 mg/kg dwt	Assessment Factors
	Marine water	0.00009 mg/l	Assessment Factors
	Fresh water	0.0009 mg/l	Assessment Factors
	Sewage Treatment Plant	0.1284 mg/kg dwt	Assessment Factors
2-(2-Butoxyethoxy)ethanol.	Fresh water	1.1 mg/l	-
	Fresh water sediment	4.4 mg/kg	-
	Marine water	0.11 mg/l	-
	Marine water sediment	0.44 mg/kg	-
	Sewage Treatment Plant	200 mg/l	-
	Soil	0.32 mg/kg	-
	Secondary Poisoning	56 mg/kg	-
2-aminoethanol	Fresh water	0.085 mg/l	-
	Marine	0.0085 mg/l	-
	Secondary Poisoning	0.025 mg/l	-
	Fresh water sediment	0.425 mg/kg wwt	-
	Marine water sediment	0.0425 mg/kg wwt	-
	Soil	0.035 mg/kg wwt	-
	Sewage Treatment Plant	100 mg/l	-
propane-1,2-diol	Fresh water	260 mg/l	-
	Marine water	26 mg/l	-
	Sewage Treatment Plant	20000 mg/l	-
	Fresh water sediment	572 mg/l	-
	Marine water sediment	57.2 mg/l	-
	Soil	50 mg/l	-

8.2 Exposure controls

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

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. (EN166) If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

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. Wear suitable gloves tested to EN374. 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.

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. (EN343)

SECTION 8: Exposure controls/personal protection

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.

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.

Color : Colorless. Dark purple.

Odor : Characteristic.

Odor threshold : Not available.

Melting point/freezing point : Not available.

Initial boiling point and boiling range : Not available.

Flammability : Not available.

Lower and upper explosion limit : Not available.

Flash point :

	Closed cup			Open cup		
Ingredient name	**°C**	**°F**	**Method**	**°C**	**°F**	**Method**
2-aminoethanol	85 to 96	185 to 204.8		93	199.4	
propane-1,2-diol	99	210.2	Pensky-Martens			
2-(2-Butoxyethoxy)ethanol.	101	213.8	DIN 51758			
2-phenoxyethanol	126	258.8				
2-phenylphenol (ISO)	138	280.4				
2,2'-iminodiethanol; diethanolamine	138	280.4		136.85	278.3	
2,2',2"-nitrilotriethanol	185	365	TCC			

Auto-ignition temperature :

Ingredient name	°C	°F	Method
2-(2-Butoxyethoxy)ethanol.	210	410	
2,2',2"-nitrilotriethanol	324	615.2	
propane-1,2-diol	371	699.8	
2-aminoethanol	385 to 410	725 to 770	
2-phenoxyethanol	500	932	
2-phenylphenol (ISO)	515	959	
2,2'-iminodiethanol; diethanolamine	662.22	1224	

Decomposition temperature : Not available.

SECTION 9: Physical and chemical properties

pH : 13

Viscosity : Not available.

Solubility(ies) :

Media	Result
cold water	Easily soluble
hot water	Easily soluble

Solubility in water : Not available.

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

Vapor pressure :

	Vapor Pressure at 20˚C			Vapor pressure at 50˚C		
Ingredient name	**mm Hg**	**kPa**	**Method**	**mm Hg**	**kPa**	**Method**
water	23.8	3.2				
2-(2-Butoxyethoxy)ethanol.	23.17	3.1				
Potassium hydroxide	7.5	1				
2-aminoethanol	0.4 to 0.5	0.053 to 0.067				
propane-1,2-diol	0.15	0.02				
2-phenoxyethanol	0.01	0.0013		0.14	0.019	
2,2',2''-nitrilotriethanol	<0.01	<0.0013				
2-phenylphenol (ISO)	0.000525	0.00007				
1,2-benzisothiazol-3(2H)-one	0.000002775	0.00000037				
Sodium hydroxide	0	0				

Relative density : 1.035

Vapor density : Not available.

Explosive properties : Non-explosive in the presence of the following materials or conditions: open flames, sparks and static discharge, heat, shocks and mechanical impacts, oxidizing materials, reducing materials, combustible materials, organic materials, metals, acids, alkalis and moisture.

Oxidizing properties : Not available.

Particle characteristics

Median particle size : 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 : Reactive or incompatible with the following materials:
acids

SECTION 10: Stability and reactivity

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	Species	Dose	Exposure
2-phenoxyethanol	LD50 Dermal	Rabbit	5000 mg/kg	-
	LD50 Dermal	Rat	14422 mg/kg	-
	LD50 Oral	Rat	1260 mg/kg	-
	LD50 Oral	Rat	1850 mg/kg	-
2-phenylphenol (ISO)	LC50 Inhalation Dusts and mists	Rat	>949 mg/m³	1 hours
	LC50 Inhalation Dusts and mists	Rat	>36 mg/m³	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Cat	500 mg/kg	-
	LD50 Oral	Mouse	1050 mg/kg	-
	LD50 Oral	Rat	2 g/kg	-
	LD50 Oral	Rat	2980 mg/kg	-
2-(2-Butoxyethoxy)ethanol.	LC50 Inhalation Gas.	Rat	>29 ppm	2 hours
	LD50 Dermal	Rabbit	2700 mg/kg	-
	LD50 Oral	Rat	3384 mg/kg	-
Potassium hydroxide	LD50 Oral	Rat	333 mg/kg	-
2-aminoethanol	LC50 Inhalation Vapor	Rat	>1.3 mg/l	6 hours
	LD50 Dermal	Rabbit	2504 mg/kg	-
	LD50 Oral	Rat	1089 mg/kg	-
1,2-benzisothiazol-3(2H)-one	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Mouse	1150 mg/kg	-
	LD50 Oral	Rat	597 mg/kg	-

Conclusion/Summary : Not available.

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
TROYSHIELD FF5	11336.5	73480.3	N/A	734.8	N/A
2-phenoxyethanol	1394	5000	N/A	N/A	N/A
2-(2-Butoxyethoxy)ethanol.	3384	2700	N/A	N/A	N/A
Potassium hydroxide	333	N/A	N/A	N/A	N/A
2-aminoethanol	1089	1100	N/A	11	N/A
1,2-benzisothiazol-3(2H)-one	597	N/A	N/A	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2-phenoxyethanol	Eyes - Irritant	Rabbit	-	-	-
2-phenylphenol (ISO)	Eyes - Cornea opacity	Rabbit	2.33	4 hours	-
	Eyes - Edema of the conjunctivae	Rabbit	3.61	4 hours	-
	Eyes - Iris lesion	Rabbit	1	4 hours	-
	Eyes - Redness of the conjunctivae	Rabbit	2.5	4 hours	-
	Skin - Edema	Rabbit	1.3	4 hours	-
	Skin - Erythema/Eschar	Rabbit	2.8	4 hours	-
2-(2-Butoxyethoxy)ethanol.	Eyes - Mild irritant	Rabbit	-	-	-

SECTION 11: Toxicological information

Potassium hydroxide	Eyes - Moderate irritant	Rabbit	-	24 hours 1 milligrams	-
	Skin - Severe irritant	Guinea pig	-	24 hours 50 milligrams	-
	Skin - Severe irritant	Human	-	24 hours 50 milligrams	-
	Skin - Severe irritant	Rabbit	-	24 hours 50 milligrams	-
1,2-benzisothiazol-3(2H)-one	Eyes - Severe irritant	Rat	-	-	-
	Skin - Moderate irritant	Rabbit	-	-	-

Conclusion/Summary : Not available.

Sensitization

Product/ingredient name	Route of exposure	Species	Result
2-phenoxyethanol	skin	Guinea pig	Not sensitizing
2-(2-Butoxyethoxy)ethanol.	skin	Guinea pig	Not sensitizing
2-aminoethanol	skin	Guinea pig	Not sensitizing
1,2-benzisothiazol-3(2H)-one	skin	Rabbit	Sensitizing

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
2-phenoxyethanol	Category 3	-	Respiratory tract irritation
2-phenylphenol (ISO)	Category 3	-	Respiratory tract irritation
2-aminoethanol	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : No known significant effects or critical hazards.

Skin contact : Causes severe burns. May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

SECTION 11: Toxicological information

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

Delayed and immediate effects and also 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.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary : 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.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
2-phenoxyethanol	EC50 >500 mg/l (biomass)	Aquatic plants - Scenedesmus subspicatus	72 hours
	Acute EC50 >500 mg/l	Daphnia	48 hours
	Acute LC50 344000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
2-phenylphenol (ISO)	Acute EC50 0.85 mg/l	Algae	72 hours
	Acute EC50 3.57 mg/l	Algae	72 hours
	Acute EC50 1.5 mg/l	Daphnia	24 hours
	Acute LC50 710 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 2.3 mg/l	Fish	96 hours
	Acute LC50 20 mg/l	Fish	96 hours
	Chronic NOEC 0.468 mg/l	Algae	72 hours
	Chronic NOEC 0.009 mg/l	Daphnia	21 days
	Chronic NOEC 0.036 mg/l	Fish	21 days
	Chronic NOEC 0.036 mg/l	Fish	21 days

SECTION 12: Ecological information

2-(2-Butoxyethoxy)ethanol.	EC50 >100 mg/l	Algae - Scenedesmus subspicatus	96 hours
	Acute EC10 1170 mg/l	Micro-organism	18 hours
	Acute EC50 >100 mg/l	Aquatic plants	96 hours
	Acute EC50 >100 mg/l	Daphnia	48 hours
	Acute EC50 >1000 mg/l	Daphnia	48 hours
	Acute LC50 2700 mg/l	Fish	96 hours
	Acute LC50 1300000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
Potassium hydroxide	Acute EC50 40 to 240 mg/l	Daphnia	48 hours
	Acute EC50 22 mg/l	Micro-organism	15 minutes
	Acute LC50 165 mg/l	Fish	24 hours
	Acute LC50 80 mg/l	Fish	96 hours
2-aminoethanol	EC10 >1000 mg/l	Micro-organism	30 minutes
	Acute EC50 2.8 mg/l	Crustaceans - Pseudikirchneriella subcapitata	72 hours
	Acute EC50 65 mg/l	Daphnia	48 hours
	Acute LC50 349 mg/l	Fish - Cyprinus carpio	96 hours
	Chronic NOEC 0.85 mg/l	Daphnia - Daphnia magna	21 days
	Chronic NOEC 1.24 mg/l	Fish - Oryzias latipes	30 days
1,2-benzisothiazol-3(2H)-one	Acute EC50 2.44 mg/l	Daphnia - Daphnia magna	48 hours
	Acute LC50 0.74 mg/l	Fish	96 hours

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
2-phenoxyethanol	301F Ready Biodegradability - Manometric Respirometry Test	99 % - Readily - 28 days	-	-
2-phenylphenol (ISO)	301D Ready Biodegradability - Closed Bottle Test	75 % - Readily - 28 days	-	-
2-(2-Butoxyethoxy)ethanol.	301E Ready Biodegradability - Modified OECD Screening Test	90 to 100 % - Readily - 14 days	-	-
	301B Ready Biodegradability - CO_2 Evolution Test	90 to 100 % - Readily - 8 days	-	-
	301C Ready Biodegradability - Modified MITI Test (I)	89 to 93 % - Readily - 28 days	-	-
2-aminoethanol	-	>90 % - Readily - 21 days	-	-

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
2-phenoxyethanol	-	-	Readily
2-phenylphenol (ISO)	-	-	Readily
2-(2-Butoxyethoxy)ethanol.	-	-	Readily
2-aminoethanol	-	-	Readily

12.3 Bioaccumulative potential

SECTION 12: Ecological information

Product/ingredient name	$LogP_{ow}$	BCF	Potential
2-phenoxyethanol	1.2	0.3493	low
2-phenylphenol (ISO)	3.18	22	low
2-(2-Butoxyethoxy)ethanol.	<1	<100	low
2-aminoethanol	-1.91	-	low
1,2-benzisothiazol-3(2H)-one	1.4	-	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

Not available.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

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).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimized 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.

Packaging

Methods of disposal : The generation of waste should be avoided or minimized 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number or ID number	UN3266	UN3266	UN3266
14.2 UN proper shipping name	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Contains: Potassium hydroxide, Aminoethanol)	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Contains: Potassium hydroxide, Aminoethanol)	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Contains: Potassium hydroxide, Aminoethanol)
14.3 Transport hazard class(es)	8 C5 	8 	8 
14.4 Packing group	II	II	II
14.5 Environmental hazards	No.	No.	No.

Additional information

ADR/RID : **Tunnel code** E

ADN : The product is only regulated as an environmentally hazardous substance when transported in tank vessels.

IMDG : **Emergency schedules** F-A, S-B

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 available.

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 authorization

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 : Not applicable.

Other EU regulations

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

SECTION 15: Regulatory information

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

Ozone depleting substances (1005/2009/EU)

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

Biocidal products regulation

Product type : Liquid.

Avoid exposure. After accidental exposure, seek immediate medical attention. Do not induce vomiting.

Product waste and emptied containers should be disposed of in accordance with local waste regulations. Do not reuse container.

Expiry date : Not available.

Do not allow to enter drains or watercourses.

Denmark

MAL-code : 2-4

Germany

Storage class (TRGS 510) : 8B

Hazard class for water : 1

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

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : At least one component is not listed.

Canada : At least one component is not listed in DSL but all such components are listed in NDSL.

China : All components are listed or exempted.

Eurasian Economic Union : **Russian Federation inventory**: Not determined.

Japan : **Japan inventory (CSCL)**: At least one component is not listed.
Japan inventory (ISHL): Not determined.

New Zealand : All components are listed or exempted.

SECTION 15: Regulatory information

Philippines : At least one component is not listed.

Republic of Korea : At least one component is not listed.

Taiwan : All components are listed or exempted.

Thailand : All components are listed or exempted.

Turkey : Not determined.

United States : All components are listed or exempted.

Viet Nam : Not determined.

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 Corr. 1B, H314	Expert judgment
Eye Dam. 1, H318	On basis of test data
Skin Sens. 1, H317	Calculation method
Aquatic Chronic 3, H412	Calculation method

Full text of abbreviated H statements

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H312	Harmful 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.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]

SECTION 16: Other information

Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	AQUATIC HAZARD (ACUTE) - Category 1
Aquatic Chronic 1	AQUATIC HAZARD (LONG-TERM) - Category 1
Aquatic Chronic 3	AQUATIC HAZARD (LONG-TERM) - Category 3
Eye Dam. 1	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Met. Corr. 1	CORROSIVE TO METALS - Category 1
Skin Corr. 1A	SKIN CORROSION/IRRITATION - Category 1A
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITIZATION - Category 1
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3

Date of printing : November 23, 2022.

Date of issue/ Date of revision : November 23, 2022.

Date of previous issue : No previous validation.

Version : 3.02

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.