Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

HIMIX GLASS E INOX ULTRA [FPF-0000016]

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

1.1. Product identifier

Product identifier: **Mixtures**

Trade name/designation: **HIMIX GLASS E INOX ULTRA FPF-0000016**

Hazard components for labelling

Substance name	Index No.	EC No.	CAS No.
propan-2-ol	603-117-00-0	200-661-7	67-63-0
2-butoxyethanol	603-014-00-0	203-905-0	111-76-2
METHOXYISOPROPANOL		203-539-1	107-98-2
1,2-benzothiazol-3-one	613-088-00-6	220-120-9	2634-33-5

Other means of identification

Unique Formula Identifier: **CC10-E0QU-S00J-NHVP**

Product category: **[P] Products**

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

Relevant identified uses

Use of the substance/mixture: **PC-CLN Cleaning, care and maintenance products (excludes biocidal products) | PC-CLN-10 Kitchen and related cleaning products (excludes biocidal products) | PC-CLN-7 Glass/window/mirror cleaning products (excludes windscreens)**

Uses advised against

Uses advised against: **The uses are provided in Section 1.2. Other uses are not recommended unless an assessment is completed, prior to commencement of that use, which demonstrates that the use will be controlled.**

Remark

1.3. Details of the supplier of the safety data sheet

Manufacturer

Rubino Chem Srl
Via Vigili del Fuoco Caduti in Servizio, 14/s
70026 Bari - Italia
+39 080 5035348
customerservice@rubinochem.it | www.rubinochem.it

Information contact

Department responsible for information: **Affari Regolatori**
Alba Rosa Russo | +39 080 5035348 | customerservice@rubinochem.it

1.4. Emergency Telephone Number

Emergency Telephone Number: **080 5035348** (Only available during office hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Hazard classes and hazard categories

Physical Hazards

Flam. Liq. 3

Health Hazards

Eye Irrit. 2 | H319

Environmental hazards

Not hazardous according to classification

Additional hazards

Not hazardous according to classification

2.2. Label elements

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

Hazard pictograms: **GHS07 | GHS02**

Signal word: **[WNG] Warning**

WARNING

Hazard Statements

Hazard statements for physical hazards

[H226] Flammable liquid and vapour.

Hazard statements for health hazards

[H319] Causes serious eye irritation.

Classification procedure: Calculation method.

Precautionary Statements

General

[P103] Read carefully and follow all instructions.

Prevention

[P264] Wash hands thoroughly after handling.

[P210] Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

[P280] Wear protective gloves/protective clothing and eye/face protection.

Response

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

[P302+P352] IF ON SKIN: Wash with plenty of soap and water.

[P337+P313] If eye irritation persists: Get medical advice/attention.

Storage

[P403+P235] Store in a well-ventilated place. Keep cool.

Disposal

[P501] Dispose of contents/container to an appropriate recycling or disposal facility.

Special rules for supplemental label elements for certain mixtures

[EUH208] Contains propan-2-ol | 2-butoxyethanol | METHOXYISOPROPANOL | 1,2-benzothiazol-3-one. May produce an allergic reaction.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1. Substances

not applicable

3.2. Mixtures

	Concentration % [weight]	Substance name	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL), M-factor, Acute toxicity estimate (ATE)
CAS No.: **67-63-0** EC No.: **200-661-7** Index No.: REACH No.:	**10 < c <= 30**	propan-2-ol	**Flam. Liq. 2, Eye Irrit. 2, STOT SE 3** [H225] Highly flammable liquid and vapour. [H336] May cause drowsiness or dizziness. [H319] Causes serious eye irritation. CLP00	
CAS No.: **111-76-2** EC No.: **203-905-0** Index No.: REACH No.:	**1 < c <= 5**	2-butoxyethanol	**Skin Irrit. 2, Eye Irrit. 2, Acute Tox. 4, Acute Tox. 3** [H331] Toxic if inhaled. [H302] Harmful if swallowed. [H315] Causes skin irritation. [H319] Causes serious eye irritation. CLP00 | ATP18	inhalation: ATE = 3 mg/L (Vapours) | oral: ATE = 1200 mg/kg bw
CAS No.: **107-98-2** EC No.: **203-539-1** Index No.: REACH No.:	**0.5 <= c <= 1.5**	1-METOSSI-2-PROPANOLO	**Flam. Liq. 3, STOT SE 3** [H226] Flammable liquid and vapour. [H336] May cause drowsiness or dizziness. CLP00 | ATP01	

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated, saturated clothing immediately.

Following inhalation

Provide fresh air. In case of respiratory tract irritation, consult a physician.

Following skin contact

After contact with skin, wash immediately with plenty of water and soap. In case of skin reactions, consult a physician.

Following eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

Following ingestion

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Do NOT induce vomiting.

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

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

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Alcohol resistant foam. Extinguishing powder. Carbon dioxide (CO2)

Unsuitable extinguishing media

Water

5.2. Special hazards arising from the substance or mixture

No information available.

5.3. Advice for firefighters

Wear full chemical protective clothing. Wear a self-contained breathing apparatus and chemical protective clothing.

5.4. Additional information

Remove heat to avoid pressure rise. Do not inhale explosion and combustion gases.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Personal precautions: Use personal protection equipment.

Protective equipment: Use appropriate respiratory protection.

Emergency procedures: Provide adequate ventilation. Remove all sources of ignition.

For emergency responders

Personal protection equipment: Use appropriate respiratory protection.

6.2. Environmental precautions

Make sure spills can be contained, e.g. in sump pallets or kerbed areas. Do not allow to enter into surface water or drains. Ensure waste is collected and contained. Ensure all waste water is collected and treated via a waste water treatment plant.

6.3. Methods and material for containment and cleaning up

For containment

No information available.

For cleaning up

Other information: Treat the recovered material as prescribed in the section on waste disposal.. Collect in closed and suitable containers for disposal.. Soak up inert absorbent and dispose as waste requiring special attention.

6.4. Reference to other sections

Safe handling: see section 7. Disposal: see section 13. Personal protection equipment: see section 8.

6.5. Additional information

No information available.

SECTION 7: Handling and Storage

7.1. Precautions for safe handling

Protective measures

Advice on safe handling

Only use the material in places where open light, fire and other flammable sources can be kept away. Always close containers tightly after the removal of product.

Put lids on containers immediately after use.

If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means.

Measures to prevent fire

Vapours are heavier than air, spread along floors and form explosive mixtures with air.. Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.. Flammable vapours can accumulate in head space of closed systems.. Handle with care - avoid bumps, friction and impact.. Wear anti-static footwear and clothing

The product is: Flammable

Measures to prevent aerosol and dust generation

Environmental precautions

See section 8.3 of the safety data sheet.

Specific requirements or handling rules

Further information

Advices on general occupational hygiene

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Keep in a cool, well-ventilated place.

Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place.

Advice on joint storage

Further information on storage conditions

General information

No information available.

Storage temperature

7.3. Specific end uses

Recommendation

Observe instructions for use.

Industrial sector specific solutions

Refer to the industry guidance prepared by Concawe/Cefic/EFCG for advice on the confirmation of strictly controlled conditions available from: https://cefic.org

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

OELV (Occupational exposure limit values)
propan-2-ol (CAS: 67-63-0) (EC: 200-661-7)

Limit value type (country of origin)	Long-term occupational exposure limit value	Short-term occupational exposure limit value	Source
Australia	400 ppm	500 ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Australia	983 mg/m³	1230 mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Austria	200 ppm	800 ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Austria	500 mg/m³	2000 mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Belgium	200 ppm	400 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Belgium	500 mg/m³	1000 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			

Limit value type (country of origin)	Long-term occupational exposure limit value	Short-term occupational exposure limit value	Source
Canada - Ontario	200 ppm	400 ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Canada - Québec	200 ppm	400 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Denmark	200 ppm	400 ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Denmark	490 mg/m³	980 mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Finland	200 ppm	250 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Finland	500 mg/m³	620 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
France		400 ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
France		980 mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Germany (AGS)	200 ppm	400 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Germany (AGS)	500 mg/m³	1000 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Germany (DFG)	200 ppm	400 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Germany (DFG)	500 mg/m³	1000 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Hungary	500 (1) mg/m³	1000 (1)(2) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Skin (2) 15 minutes average value			
Ireland	200 ppm	400 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes reference period			
Japan (MHLW)	200 ppm		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Japan (JSOH)	400 (1) ppm		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Occupational exposure limit ceiling: Reference value to the maximal exposure concentration of the substance during a working day			
Japan (JSOH)	980 (1) mg/m³		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Occupational exposure limit ceiling: Reference value to the maximal exposure concentration of the substance during a working day			
Latvia	350 mg/m³	600 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
New Zealand	400 ppm	500 ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
New Zealand	983 mg/m³	1230 mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Norway	100 ppm		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Norway	245 mg/m³		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
People's Republic of China	350 mg/m³	700 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Poland	900 (1) mg/m³	1200 (1)(2) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)

Limit value type (country of origin)	Long-term occupational exposure limit value	Short-term occupational exposure limit value	Source
(1) Skin (2) 15 minutes average value			
Romania	81 ppm	203 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Romania	200 mg/m³	500 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Singapore	400 ppm	500 ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Singapore	983 mg/m³	1230 mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
South Africa	400 ppm	800 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
South Africa Mining	400 ppm	500 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
South Africa Mining	980 mg/m³	1225 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
South Korea	200 ppm	400 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Spain	200 ppm	400 ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Spain	500 mg/m³	1000 mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Sweden	150 ppm	250 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Sweden	350 mg/m³	600 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Switzerland	200 ppm	400 ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Switzerland	500 mg/m³	1000 mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
USA - NIOSH	400 ppm	500 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
USA - NIOSH	980 mg/m³	1225 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
USA - OSHA	400 ppm		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
USA - OSHA	980 mg/m³		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
United Kingdom	400 ppm	500 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			

OELV (Occupational exposure limit values)
2-butoxyethanol (CAS: 111-76-2) (EC: 203-905-0)

Limit value type (country of origin)	Long-term occupational exposure limit value	Short-term occupational exposure limit value	Source
Australia	20 ppm	50 ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Australia	96,9 mg/m³	242 mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)

Limit value type (country of origin)	Long-term occupational exposure limit value	Short-term occupational exposure limit value	Source
Austria	20 ppm	40 ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Austria	98 mg/m³	200 mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Belgium	20 ppm	50 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Additional indication "D" means that the absorption of the agent through the skin, mucous membranes or eyes is an important part of the total exposure. It can be the result of both direct contact and its presence in the air. (1) 15 minutes average value			
Belgium	98 mg/m³	246 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Additional indication "D" means that the absorption of the agent through the skin, mucous membranes or eyes is an important part of the total exposure. It can be the result of both direct contact and its presence in the air. (1) 15 minutes average value			
Canada - Ontario	20 ppm		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Canada - Québec	20 ppm		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Denmark	20 (1) ppm	40 (1)(2) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Skin (2) 15 minutes average value			
Denmark	98 (1) mg/m³	196 (1)(2) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Skin (2) 15 minutes average value			
European Union	20 ppm	50 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value | Indicative Occupational Exposure Limit Value (IOELV) ~ (for references see bibliography)			
European Union	98 mg/m³	246 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value | Indicative Occupational Exposure Limit Value (IOELV) ~ (for references see bibliography)			
Finland	20 ppm	50 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Finland	98 mg/m³	250 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
France	10 ppm	50 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Bold type: Restrictive statutory limit values Skin (1) 15 minutes average value			
France	49 mg/m³	246 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Bold type: Restrictive statutory limit values Skin (1) 15 minutes average value			
Germany (AGS)	10 (1) ppm	20 (1)(2) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Skin (2) 15 minutes average value			
Germany (AGS)	49 (1) mg/m³	98 (1)(2) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Skin (2) 15 minutes average value			
Germany (DFG)	10 (1)(2) ppm	20 (1)(2)(3) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) MAK value applies for the sum of the concentrations of 2-Butoxyethanol and 2-Butoxyethylacetate in air (2) Skin (3) 15 minutes average value			
Germany (DFG)	49 (2) mg/m³	98 (2)(3) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) MAK value applies for the sum of the concentrations of 2-Butoxyethanol and 2-Butoxyethylacetate in air (2) Skin (3) 15 minutes average value			
Hungary	98 (1) mg/m³	246 (1)(2) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Skin (2) 15 minutes average value			
Ireland	20 ppm	50 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes reference period			
Ireland	98 mg/m³	246 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)

Limit value type (country of origin)	Long-term occupational exposure limit value	Short-term occupational exposure limit value	Source
(1) 15 minutes reference period			
Israel	20 ppm		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Israel	97 mg/m³		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Italy	20 (1) ppm	50 (1)(2) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Skin (2) 15 minutes average value			
Italy	98 (1) mg/m³	246 (1)(2) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Skin (2) 15 minutes average value			
Japan (MHLW)	25 ppm		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Japan (JSOH)	20 (1)(2) ppm		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Exposure concentrations must be kept below this level. (2) Skin			
Japan (JSOH)	97 (1)(2) mg/m³		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Exposure concentrations must be kept below this level. (2) Skin			
Latvia	20 ppm	50 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Latvia	98 mg/m³	246 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
New Zealand	25 ppm		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
New Zealand	121 mg/m³		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Norway	10 (1) ppm		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Skin			
Norway	50 (1) mg/m³		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Skin			
Poland	98 (1) mg/m³	200 (1)(2) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Skin (2) 15 minutes average value			
Romania	20 ppm	50 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Romania	98 mg/m³	246 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Singapore	25 ppm		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Singapore	121 mg/m³		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
South Africa	40 ppm		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
South Africa Mining	25 (1) ppm		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Skin			
South Africa Mining	120 (1) mg/m³		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Skin			
South Korea	20 (1) ppm		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Skin			
Spain	20 (1) ppm	50 (1)(2) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)

Limit value type (country of origin)	Long-term occupational exposure limit value	Short-term occupational exposure limit value	Source
(1) Skin (2) 15 minutes average value			
Spain	98 (1) mg/m³	245 (1)(2) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Skin (2) 15 minutes average value			
Sweden	10 ppm	50 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Sweden	50 mg/m³	246 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Switzerland	10 ppm	20 ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Switzerland	49 mg/m³	98 mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
The Netherlands	20,4 (1) ppm	50 (1)(2) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Skin (2) 15 minutes average value			

OELV (Occupational exposure limit values)
AMMONIACA ANIDRA (CAS: 7664-41-7) (EC: 231-635-3 Numero)

Limit value type (country of origin)	Long-term occupational exposure limit value	Short-term occupational exposure limit value	Source
Australia	25 ppm	35 ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Australia	17 mg/m³	24 mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Austria	20 ppm	50 ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Austria	14 mg/m³	36 mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Belgium	20 ppm	50 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 min average value			
Belgium	14 mg/m³	36 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 min average value			
Canada - Ontario	25 ppm	35 ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Canada - Québec	25 ppm	35 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Canada - Québec	17 mg/m³	24 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Denmark	20 ppm	40 ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Denmark	14 mg/m³	28 mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
European Union	20 ppm	50 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value | Indicative Occupational Exposure Limit Value (IOELV) ~ (for references see bibliography)			
European Union	14 mg/m³	36 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value | Indicative Occupational Exposure Limit Value (IOELV) ~ (for references see bibliography)			
Finland	20 ppm	50 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Finland	14 mg/m³	36 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)

Limit value type (country of origin)	Long-term occupational exposure limit value	Short-term occupational exposure limit value	Source
(1) 15 minutes average value			
France	10 ppm	20 ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Bold type: Restrictive statutory limit values			
France	7 mg/m³	14 mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Bold type: Restrictive statutory limit values			
Germany (AGS)	20 ppm	40 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 Minutes average value			
Germany (AGS)	14 mg/m³	28 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 Minutes average value			
Germany (DFG)	20 ppm	40 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Germany (DFG)	14 mg/m³	28 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Hungary	14 mg/m³	36 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Ireland	20 ppm	50 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes reference period			
Ireland	14 mg/m³	36 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes reference period			
Israel	25 ppm		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Israel	17 mg/m³		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Italy	20 ppm	50 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Italy	14 mg/m³	36 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Japan (JSOH)	25 ppm		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Japan (JSOH)	17 mg/m³		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Latvia	20 ppm	50 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Latvia	14 mg/m³	36 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
New Zealand	25 ppm	35 ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
New Zealand	17 mg/m³	24 mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Norway	15 (1) ppm	50 (1)(2) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) For agriculture, during a transitional period (2013-2024) a limit of 20 ppm for animal production in older farm buildings (farm buildings built before 2002) will apply. (2) 15 minutes average value			
Norway	11 (1) mg/m³	36 (1)(2) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) For agriculture, during a transitional period (2013-2024) a limit of 20 ppm for animal production in older farm buildings (farm buildings built before 2002) will apply. (2) 15 minutes average value			
People's Republic of China	20 mg/m³	30 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)

Limit value type (country of origin)	Long-term occupational exposure limit value	Short-term occupational exposure limit value	Source
(1) 15 minutes average value			
Poland	14 mg/m³	28 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Romania	20 ppm	50 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Romania	14 mg/m³	36 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Singapore	25 ppm	35 ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Singapore	17 mg/m³	24 mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
South Africa	50 ppm	70 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
South Africa Mining	25 ppm	35 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
South Africa Mining	17 mg/m³	24 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
South Korea	25 ppm	35 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Spain	20 ppm	50 ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Spain	14 mg/m³	36 mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Sweden	20 ppm	50 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Ceiling limit value, refers to a 5 minutes period.			
Sweden	14 mg/m³	36 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Ceiling limit value, refers to a 5 minutes period.			
Switzerland	20 ppm	40 ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Switzerland	14 mg/m³	28 mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
The Netherlands	20 ppm	50 (1) ppm	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			

OELV (Occupational exposure limit values)
sodium hydroxide (CAS: 1310-73-2) (EC: 215-185-5)

Limit value type (country of origin)	Long-term occupational exposure limit value	Short-term occupational exposure limit value	Source
Australia		2 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Ceiling limit value			
Austria	2 inhalable aerosol mg/m³	4 inhalable aerosol mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Belgium	2 (1) mg/m³		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Additional indication "M" means that irritation occurs when the exposure exceeds the limit value or there is a risk of acute poisoning. The work process must be designed in such a way that the exposure never exceeds the limit value. For evaluation, the sampled period should be as short as possible. However, the sampled period shall be long enough to perform a reliable measurement. The measured result shall be related to the considered period.			

Limit value type (country of origin)	Long-term occupational exposure limit value	Short-term occupational exposure limit value	Source
Canada - Ontario		2 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Ceiling limit value			
Canada - Québec		2 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Ceiling limit value			
Denmark	2 mg/m³	2 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Ceiling limit value			
Finland		2 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Ceiling limit value			
France	2 mg/m³		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Hungary	1 mg/m³	2 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Ireland		2 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes reference period			
Japan (JSOH)	2 (1) mg/m³		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Occupational exposure limit ceiling: Reference value to the maximal exposure concentration of the substance during a working day			
Latvia	0,5 mg/m³		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
New Zealand		2 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Ceiling limit value			
Norway		2 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Ceiling limit value			
People's Republic of China		2 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Ceiling limit value			
Poland	0,5 mg/m³	1 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Romania	1 mg/m³	3 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			
Singapore		2 mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
South Africa		4 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Ceiling limit value			
South Africa Mining		2 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Ceiling limit value			
South Korea		2 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Ceiling limit value			
Spain	2 mg/m³		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
Sweden	1 (1) mg/m³	2 (1)(2) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) Inhalable fraction (2) 15 minutes average value			
Switzerland	2 inhalable aerosol mg/m³	2 inhalable aerosol mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
USA - NIOSH		2 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)

Limit value type (country of origin)	Long-term occupational exposure limit value	Short-term occupational exposure limit value	Source
(1) Ceiling limit value (15 min)			
USA - OSHA	2 mg/m³		GESTIS International Limit Values (limitvalue.ifa.dguv.de)
United Kingdom		2 (1) mg/m³	GESTIS International Limit Values (limitvalue.ifa.dguv.de)
(1) 15 minutes average value			

BLV (Biological limit values)

No information available.

DNEL-/PNEC-values

DNEL (Derived No Effect Level) | Worker
propan-2-ol (CAS: 67-63-0) (EC: 200-661-7)

Type	Value	Source	Remark
Acute – dermal, local effects	No hazard identified	ECHA/IUCLID	Extrapolation.
Acute – dermal, systemic effects	No hazard identified	ECHA/IUCLID	Extrapolation.
Long-term – dermal, local effects	No hazard identified	ECHA/IUCLID	Extrapolation.
Long-term – dermal, systemic effects	888 mg/kg bw/day	ECHA/IUCLID	Extrapolation.
Acute – inhalation, local effects	No hazard identified	ECHA/IUCLID	Extrapolation.
Acute – inhalation, systemic effects	1000 mg/m³	ECHA/IUCLID	Extrapolation.
Long-term – inhalation, local effects	No hazard identified	ECHA/IUCLID	Extrapolation.
Long-term – inhalation, systemic effects	500 mg/m³	ECHA/IUCLID	Extrapolation.

PNEC (Predicted No-Effect Concentration)
propan-2-ol (CAS: 67-63-0) (EC: 200-661-7)

PNEC type	Value	Source	Remark
aquatic, freshwater	No hazard identified	ECHA/IUCLID	Extrapolation.
aquatic, marine water	No hazard identified	ECHA/IUCLID	Extrapolation.
aquatic, intermittent release	No hazard identified	ECHA/IUCLID	Extrapolation.
sediment, freshwater	No hazard identified	ECHA/IUCLID	Extrapolation.
sediment, marine water	No hazard identified	ECHA/IUCLID	Extrapolation.
soil	No hazard identified	ECHA/IUCLID	Extrapolation.
sewage treatment plant	No hazard identified	ECHA/IUCLID	Extrapolation.
air	No hazard identified	ECHA/IUCLID	Extrapolation.
secondary poisoning		ECHA/IUCLID	Extrapolation.

DNEL (Derived No Effect Level) | Worker
2-butoxyethanol (CAS: 111-76-2) (EC: 203-905-0)

Type	Value	Source	Remark
Acute – dermal, local effects	(Medium hazard (no threshold derived))	ECHA/IUCLID	Extrapolation.
Acute – dermal, systemic effects	No hazard identified	ECHA/IUCLID	Extrapolation.
Long-term – dermal, local effects	No hazard identified	ECHA/IUCLID	Extrapolation.
Long-term – dermal, systemic effects	(Low hazard (no threshold derived))	ECHA/IUCLID	Extrapolation.
Acute – inhalation, local effects	246 mg/m³	ECHA/IUCLID	Extrapolation.
Acute – inhalation, systemic effects	1091 mg/m³	ECHA/IUCLID	Extrapolation.

Type	Value	Source	Remark
Long-term – inhalation, local effects	No hazard identified	ECHA/IUCLID	Extrapolation.
Long-term – inhalation, systemic effects	98 mg/m³	ECHA/IUCLID	Extrapolation.

PNEC (Predicted No-Effect Concentration)
2-butoxyethanol (CAS: 111-76-2) (EC: 203-905-0)

PNEC type	Value	Source	Remark
aquatic, freshwater	8.8 mg/L	ECHA/IUCLID	Extrapolation.
aquatic, marine water	880 µg/L	ECHA/IUCLID	Extrapolation.
aquatic, intermittent release	26.4 mg/L	ECHA/IUCLID	Extrapolation.
sediment, freshwater	34.6 mg/kg sediment dw	ECHA/IUCLID	Extrapolation.
sediment, marine water	3.46 mg/kg sediment dw	ECHA/IUCLID	Extrapolation.
soil	2.33 mg/kg soil dw	ECHA/IUCLID	Extrapolation.
sewage treatment plant	463 mg/L	ECHA/IUCLID	Extrapolation.
air	No hazard identified	ECHA/IUCLID	Extrapolation.
secondary poisoning	20 mg/kg food	ECHA/IUCLID	Extrapolation.

DNEL (Derived No Effect Level) | Worker
1-METOSSI-2-PROPANOLO (CAS: 107-98-2) (EC: 203-539-1)

Type	Value	Source	Remark
Acute – dermal, local effects		ECHA/IUCLID	
Acute – dermal, systemic effects		ECHA/IUCLID	
Long-term – dermal, local effects		ECHA/IUCLID	
Long-term – dermal, systemic effects		ECHA/IUCLID	
Acute – inhalation, local effects	553.5 mg/m³	ECHA/IUCLID	Extrapolation.
Acute – inhalation, systemic effects		ECHA/IUCLID	
Long-term – inhalation, local effects	mg/m³	ECHA/IUCLID	
Long-term – inhalation, systemic effects	369 mg/m³	ECHA/IUCLID	Extrapolation.

PNEC (Predicted No-Effect Concentration)
1-METOSSI-2-PROPANOLO (CAS: 107-98-2) (EC: 203-539-1)

PNEC type	Value	Source	Remark
aquatic, freshwater	10 mg/L	ECHA/IUCLID	Extrapolation.
aquatic, marine water	1 mg/L	ECHA/IUCLID	Extrapolation.
aquatic, intermittent release	100 mg/L	ECHA/IUCLID	Extrapolation.
sediment, freshwater	52.3 mg/L	ECHA/IUCLID	Extrapolation.
sediment, marine water	5.2 mg/L	ECHA/IUCLID	Extrapolation.
soil	5.49 mg/L	ECHA/IUCLID	Extrapolation.
sewage treatment plant	100 mg/L	ECHA/IUCLID	Extrapolation.
air		ECHA/IUCLID	
secondary poisoning		ECHA/IUCLID	

DNEL (Derived No Effect Level) | Worker
Alcohols, C9-11, ethoxylated propoxylated (CAS: 103818-93-5) (EC: /)

No information available.

PNEC (Predicted No-Effect Concentration)
Alcohols, C9-11, ethoxylated propoxylated (CAS: 103818-93-5) (EC: /)

No information available.

DNEL (Derived No Effect Level) | Worker
SODIUM DIOCTYL SULFOSUCCINATE (CAS: 577-11-7) (EC: 209-406-4)

No information available.

PNEC (Predicted No-Effect Concentration)
SODIUM DIOCTYL SULFOSUCCINATE (CAS: 577-11-7) (EC: 209-406-4)

PNEC type	Value	Source	Remark
aquatic, freshwater	0.18 mg/L	ECHA/IUCLID	
aquatic, marine water	0.018 mg/L	ECHA/IUCLID	Extrapolation.
aquatic, intermittent release		ECHA/IUCLID	
sediment, freshwater	17.789 mg/kg sediment dw	ECHA/IUCLID	Extrapolation.
sediment, marine water	1.779 mg/kg sediment dw	ECHA/IUCLID	Extrapolation.
soil	1.04 mg/L	ECHA/IUCLID	Extrapolation.
sewage treatment plant	12.2 mg/L	ECHA/IUCLID	
air		ECHA/IUCLID	
secondary poisoning		ECHA/IUCLID	

DNEL (Derived No Effect Level) | Worker
AMMONIACA ANIDRA (CAS: 7664-41-7) (EC: 231-635-3 Numero)

Type	Value	Source	Remark
Acute – dermal, local effects	(Medium hazard (no threshold derived))	ECHA/IUCLID	Extrapolation.
Acute – dermal, systemic effects	6.8 mg/kg bw/day	ECHA/IUCLID	Extrapolation.
Long-term – dermal, local effects	(Medium hazard (no threshold derived))	ECHA/IUCLID	Extrapolation.
Long-term – dermal, systemic effects	6.8 mg/kg bw/day	ECHA/IUCLID	Extrapolation.
Acute – inhalation, local effects	36 mg/m^3	ECHA/IUCLID	Extrapolation.
Acute – inhalation, systemic effects	47.6 mg/m^3	ECHA/IUCLID	Extrapolation.
Long-term – inhalation, local effects	14 mg/m^3	ECHA/IUCLID	Extrapolation.
Long-term – inhalation, systemic effects	47.6 mg/m^3	ECHA/IUCLID	Extrapolation.

PNEC (Predicted No-Effect Concentration)
AMMONIACA ANIDRA (CAS: 7664-41-7) (EC: 231-635-3 Numero)

PNEC type	Value	Source	Remark
aquatic, freshwater	1.35 µg/L	ECHA/IUCLID	Extrapolation.
aquatic, marine water	1.35 µg/L	ECHA/IUCLID	Extrapolation.
aquatic, intermittent release	8.3 µg/L	ECHA/IUCLID	Extrapolation.
sediment, freshwater	No hazard identified	ECHA/IUCLID	Extrapolation.
sediment, marine water	No hazard identified	ECHA/IUCLID	Extrapolation.
soil	22.1 µg/kg soil dw	ECHA/IUCLID	Extrapolation.
sewage treatment plant	No hazard identified	ECHA/IUCLID	Extrapolation.
air	No hazard identified	ECHA/IUCLID	Extrapolation.
secondary poisoning		ECHA/IUCLID	Extrapolation.

DNEL (Derived No Effect Level) | Worker
1,2-benzothiazol-3-one (CAS: 2634-33-5) (EC: 220-120-9)

Type	Value	Source	Remark
Acute – dermal, local effects	High hazard (no threshold derived)	ECHA/IUCLID	Extrapolation.
Acute – dermal, systemic effects	No hazard identified	ECHA/IUCLID	Extrapolation.
Long-term – dermal, local effects	High hazard (no threshold derived)	ECHA/IUCLID	Extrapolation.
Long-term – dermal, systemic effects	966 µg/kg bw/day	ECHA/IUCLID	Extrapolation.
Acute – inhalation, local effects	No hazard identified	ECHA/IUCLID	Extrapolation.
Acute – inhalation, systemic effects	No hazard identified	ECHA/IUCLID	Extrapolation.
Long-term – inhalation, local effects	No hazard identified	ECHA/IUCLID	Extrapolation.
Long-term – inhalation, systemic effects	6.81 mg/m³	ECHA/IUCLID	Extrapolation.

PNEC (Predicted No-Effect Concentration)
1,2-benzothiazol-3-one (CAS: 2634-33-5) (EC: 220-120-9)

PNEC type	Value	Source	Remark
aquatic, freshwater	4.03 µg/L	ECHA/IUCLID	Extrapolation.
aquatic, marine water	403 ng/L	ECHA/IUCLID	Extrapolation.
aquatic, intermittent release	1.1 µg/L	ECHA/IUCLID	Extrapolation.
sediment, freshwater	49.9 µg/kg sediment dw	ECHA/IUCLID	Extrapolation.
sediment, marine water	4.99 µg/kg sediment dw	ECHA/IUCLID	Extrapolation.
soil	3 mg/kg soil dw	ECHA/IUCLID	Extrapolation.
sewage treatment plant	1.03 mg/L	ECHA/IUCLID	Extrapolation.
air	No hazard identified	ECHA/IUCLID	Extrapolation.
secondary poisoning		ECHA/IUCLID	Extrapolation.

DNEL (Derived No Effect Level) | Worker
sodium hydroxide (CAS: 1310-73-2) (EC: 215-185-5)

Type	Value	Source	Remark
Acute – dermal, local effects	High hazard (no threshold derived)	ECHA/IUCLID	Extrapolation.
Acute – dermal, systemic effects	No hazard identified	ECHA/IUCLID	Extrapolation.
Long-term – dermal, local effects	High hazard (no threshold derived)	ECHA/IUCLID	Extrapolation.
Long-term – dermal, systemic effects	No hazard identified	ECHA/IUCLID	Extrapolation.
Acute – inhalation, local effects	No hazard identified	ECHA/IUCLID	Extrapolation.
Acute – inhalation, systemic effects	No hazard identified	ECHA/IUCLID	Extrapolation.
Long-term – inhalation, local effects	1 mg/m³	ECHA/IUCLID	Extrapolation.
Long-term – inhalation, systemic effects	No hazard identified	ECHA/IUCLID	Extrapolation.

PNEC (Predicted No-Effect Concentration)
sodium hydroxide (CAS: 1310-73-2) (EC: 215-185-5)

PNEC type	Value	Source	Remark
aquatic, freshwater	:	ECHA/IUCLID	Extrapolation.
aquatic, marine water	:	ECHA/IUCLID	Extrapolation.
aquatic, intermittent release	:	ECHA/IUCLID	Extrapolation.
sediment, freshwater	:	ECHA/IUCLID	Extrapolation.

PNEC type	Value	Source	Remark
sediment, marine water	:	ECHA/IUCLID	Extrapolation.
soil	:	ECHA/IUCLID	Extrapolation.
sewage treatment plant	:	ECHA/IUCLID	Extrapolation.
air	No hazard identified	ECHA/IUCLID	Extrapolation.
secondary poisoning		ECHA/IUCLID	Extrapolation.

8.2. Exposure controls

Appropriate engineering controls

No information available.

Personal protection equipment

Eye/face protection

Suitable eye protection: Spectacles with side protection.

Recommended eye protection articles

DIN-/EN-Norms: EN 166

Other eye protection

No information available.

Remark

No information available.

Skin protection

Hand protection | By short-term hand contact

Suitable gloves type: Mittens.

Suitable material: NBR (nitrile rubber).|NR (natural rubber, natural latex).

Required properties: liquid-tight

Thickness of the glove material: 0.1 mm

Hand protection | By long-term hand contact

Suitable gloves type: Mittens.

Suitable material: liquid-tight|NR (natural rubber, natural latex).|NBR (nitrile rubber).

Required properties: liquid-tight

Permeation time (maximum wear duration): 1h

Recommended glove articles

No information available.

Additional hand protection measures

No information available.

Remark

No information available.

Body protection

Suitable protective clothing Chemical protection clothing.

Required properties: antistatic

Recommended protective clothing articles

No information available.

Additional body protection measures

No information available.

Remark

No information available.

Other skin protection

No information available.

Respiratory protection

Respiratory protection necessary at: prolonged exposure

Protection type: Filtering device

Recommended respiratory protection articles

No information available.

Additional measures for respiratory protection

No information available.

Remark

No information available.

Thermal hazards

No information available.

Remark

No information available.

Environmental exposure controls

No information available.

Remark

No information available.

Consumer exposure controls

No information available.

8.3. Additional information

No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

	Value	Method	Source	Remark
Physical state	liquid melt			
Colour	transparent			
Odour	characteristic			
Odour threshold	ND			
Melting point/freezing point	ND			
Boiling point or initial boiling point and boiling range	82.5 °C			
Flammability	ND			
Lower and upper explosion limit	ND			
Flash point	30 °C			[H226] Flammable liquid and vapour.
Auto-ignition temperature	ND			
Decomposition temperature	ND			
pH	in aqueous solution 10 | Concentration 100			
Viscosity	ND			
Solubility	ND			
Partition coefficient n-octanol/water (log value)	ND			
Vapour pressure	ND			
Density/Relative density	ND			
Relative vapour density	ND			
Particle characteristics	ND			

9.2. Other information

Information with regard to physical hazard classes

No information available.

Other physical and chemical properties

No information available.

SECTION 10: Stability and Reactivity

10.1. Reactivity

This material is considered to be non-reactive under normal use conditions.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

In use, may form flammable/explosive vapour-air mixture.

10.4. Conditions to avoid

[P210] Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Avoid: electrostatic discharge extreme temperatures prolonged exposure to extreme heat exposure to light

10.5. Incompatible materials

Further information on proper storage: see section 7.

10.6. Hazardous decomposition products

Thermal decomposition can lead to the escape of irritating gases and vapours.

10.7. Additional information

No information available.

SECTION 11: Toxicological information

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

Toxicokinetics, metabolism and distribution

Non-human toxikological data

No information available.

Human toxicological data

No information available.

Acute toxicity

Practical experience/human evidence

No information available.

Animal data

propan-2-ol (CAS: 67-63-0) (EC: 200-661-7)

	Effect dose / - concentration	Value	Species	Method	Symptoms/ delayed effects	Source	Remark
Acute oral toxicity oral	**LD50**	**5840 mg/kg bw**	Rat ()			ECHA Brief Profile	
Acute inhalation toxicity (vapour) vapour	**LC50**	**10000 ppm | Exposure time: 6h**	Rat ()			ECHA Brief Profile	
Acute dermal toxicity dermal	**LD50**	**16.4 mg/kg bw**	Rabbit ()			ECHA Brief Profile	

2-butoxyethanol (CAS: 111-76-2) (EC: 203-905-0)

	Effect dose / - concentration	Value	Species	Method	Symptoms/ delayed effects	Source	Remark

Acute dermal toxicity dermal	**LD50**	**>2000 mg/kg bw**	Rat ()	OECD 402	nocivo se ingerito. tossico se inalato	SDS FORNITORE	
Acute inhalation toxicity (vapour) vapour	**LC50**	**3 mg/L | Exposure time:**	()				
Acute oral toxicity oral	**LD50**	**1200 mg/kg bw**	()				

1-METOSSI-2-PROPANOLO (CAS: 107-98-2) (EC: 203-539-1)

	Effect dose / -concentration	Value	Species	Method	Symptoms/ delayed effects	Source	Remark
Acute oral toxicity oral	**LD50**	**4016**	Rat ()			SDS FORNITORE	
Acute dermal toxicity dermal	**LD50**	**> 2000 mg/kg**	Rat ()			SDS FORNITORE	
Acute inhalation toxicity (vapour) vapour	**LC50**	**28.8 mg/L | Exposure time:**	Rat ()			SDS FORNITORE	

Alcohols, C9-11, ethoxylated propoxylated (CAS: 103818-93-5) (EC: /)

	Effect dose / -concentration	Value	Species	Method	Symptoms/ delayed effects	Source	Remark
Acute oral toxicity oral	**LD50**	**2000 mg/kg bw**	Rat (male)			CESIO	

SODIUM DIOCTYL SULFOSUCCINATE (CAS: 577-11-7) (EC: 209-406-4)

	Effect dose / -concentration	Value	Species	Method	Symptoms/ delayed effects	Source	Remark
Acute oral toxicity oral	**LD50**	**3000 mg/kg**	Rat (male)	OECD 401		SDS FORNITORE	

AMMONIACA ANIDRA (CAS: 7664-41-7) (EC: 231-635-3 Numero)

	Effect dose / -concentration	Value	Species	Method	Symptoms/ delayed effects	Source	Remark
Acute inhalation toxicity (vapour) vapour	**LC50**	**13.77 mg/L | Exposure time: 1h**	Rat (male)			ECHA Brief Profile	literature value

1,2-benzothiazol-3-one (CAS: 2634-33-5) (EC: 220-120-9)

	Effect dose / -concentration	Value	Species	Method	Symptoms/ delayed effects	Source	Remark
Acute oral toxicity oral	**LD50**	**490 mg/kg bw**	Rat (male)				
Acute dermal toxicity dermal	**LD50**	**2000 mg/kg bw**	Rat ()				

No information available.

Other information

No information available.

Assessment / classification

No information available.

Skin corrosion/irritation

Practical experience/human evidence

No information available.

Acid/alkaline reserve

No information available.

Animal data

No information available.

Other information

No information available.

Assessment / classification

No information available.

Serious eye damage/irritation

Practical experience/human evidence

No information available.

Animal data

No information available.

Other information

No information available.

Assessment / classification

No information available.

Respiratory or skin sensitisation

Sensitisation to the respiratory tract

Practical experience/human evidence

No information available.

Other information

No information available.

Assessment / classification

No information available.

Skin sensitisation

Practical experience/human evidence

No information available.

Animal data

No information available.

Other information

No information available.

Assessment / classification

No information available.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Germ cell mutagenicity

In vitro mutagenicity/genotoxicity

No information available.

In vivo mutagenicity/genotoxicity

No information available.

Other information

No information available.

Human toxicological data

No information available.

Assessment / classification

No information available.

Carcinogenicity

Practical experience/human evidence

No information available.

Animal data

No information available.

Other information

No information available.

Assessment / classification

No information available.

Reproductive toxicity

Practical experience/human evidence

No information available.

Animal data

Adverse effects on sexual function and fertility

No information available.

Adverse effects on developmental toxicity

No information available.

Effects on or via lactation

No information available.

Other information

No information available.

Assessment / classification

No information available.

Overall assessment on CMR properties

No information available.

STOT - Single exposure

STOT SE 1 and 2

Practical experience/human evidence

No information available.

Animal data

Oral specific target organ toxicity (single exposure)

No information available.

Dermal specific target organ toxicity (single exposure)

No information available.

Inhalative specific target organ toxicity (single exposure)

No information available.

Other information

No information available.

Assessment / classification

No information available.

STOT SE 3

Irritation to respiratory tract

Practical experience/human evidence

No information available.

Other information

No information available.

Assessment / classification

No information available.

Narcotic effects

Practical experience/human evidence

No information available.

Other information

No information available.

Assessment / classification

No information available.

STOT - Repeated exposure

Practical experience/human evidence

No information available.

Animal data

Oral specific target organ toxicity (repeated exposure)

No information available.

Dermal specific target organ toxicity (repeated exposure)

No information available.

Inhalative specific target organ toxicity (single exposure)

No information available.

Other information

No information available.

Assessment / classification

No information available.

Aspiration hazard

Practical experience/human evidence

No information available.

Experimental data

No information available.

Assessment / classification

No information available.

Symptoms related to the physical, chemical and toxicological characteristics

In case of ingestion

No information available.

In case of skin contact

No information available.

In case of inhalation

No information available.

In case of eye contact

No information available.

Additional information

No information available.

11.2. Information on other hazards

Endocrine disrupting properties

No information available.

Other information

No information available.

SECTION 12: Ecological information

12.1. Toxicity

Aquatic toxicity

2-butoxyethanol (CAS: 111-76-2) (EC: 203-905-0)

	Effect dose / - concentration	Value	Test duration	Species	Result / evaluation	Method	Evaluation parameter	Source	Remark
Acute (short-term) fish toxicity	**LC50**	1474 mg/L	96 h	Oncorhynchus mykiss (rainbow trout)		OECD 203		SDS FORNITORE	
Chronic (long-term) fish toxicity	**NOEC**	>100 mg/L	21 d	Danio rerio (zebra-fish)		OECD 204		SDS FORNITORE	

	Effect dose / - concentration	Value	Test duration	Species	Result / evaluation	Method	Evaluation parameter	Source	Remark
Acute (short-term) toxicity to aquatic invertebrates	**EC50**	1550 mg/L	48 h	Daphnia magna (Big water flea)		OECD 202		SDS FORNITORE	
Acute (short-term) toxicity to algae and cyanobacteria	**EC50**	911 mg/L	72 h	Pseudokirchneriella subcapitata		OECD 201		SDS FORNITORE	

1-METOSSI-2-PROPANOLO (CAS: 107-98-2) (EC: 203-539-1)

	Effect dose / - concentration	Value	Test duration	Species	Result / evaluation	Method	Evaluation parameter	Source	Remark
Acute (short-term) fish toxicity	**LC50**	4600-10000 mg/L	96 h					SDS FORNITORE	
Acute (short-term) toxicity to aquatic invertebrates	**EC50**	23300 mg/L	48 h	Daphnia magna (Big water flea)				SDS FORNITORE	
Acute (short-term) toxicity to algae and cyanobacteria	**EC50**	>1000 mg/L	96 h	Selenastrum capricornutum				SDS FORNITORE	

Alcohols, C9-11, ethoxylated propoxylated (CAS: 103818-93-5) (EC: /)

	Effect dose / - concentration	Value	Test duration	Species	Result / evaluation	Method	Evaluation parameter	Source	Remark
Acute (short-term) toxicity to algae and cyanobacteria	**EC50**	100 mg/L	72 h	Chlorella vulgaris		OECD 201			
Acute (short-term) toxicity to aquatic invertebrates	**EC50**	10 mg/L	48 h	Daphnia magna (Big water flea)		OECD 202			

SODIUM DIOCTYL SULFOSUCCINATE (CAS: 577-11-7) (EC: 209-406-4)

	Effect dose / - concentration	Value	Test duration	Species	Result / evaluation	Method	Evaluation parameter	Source	Remark
Acute (short-term) fish toxicity	**LC50**	49 mg/L	96 h			Regulation (EC) No. 440/2008, Annex, C.1		SDS FORNITORE	
Acute (short-term) toxicity to aquatic invertebrates	**EC50**	6.6 mg/L	48 h	Daphnia magna (Big water flea)		Regulation (EC) No. 440/2008, Annex, C.2		SDS FORNITORE	
Acute (short-term) toxicity to algae and cyanobacteria	**EC50**	82.5 mg/L	72 h			Regulation (EC) No. 440/2008, Annex, C.3		SDS FORNITORE	

No information available.

Sediment toxicity

No information available.

Terrestrial toxicity

No information available.

Assessment / classification

No information available.

12.2. Persistence and degradability

Biodegradation

No information available.

Abiotic degradation

No information available.

Assessment / classification

No information available.

12.3. Bioaccumulative potential

Bioconcentration factor (BCF)

No information available.

Assessment / classification

No information available.

12.4. Mobility in soil

No information available.

Assessment / classification

No information available.

12.5. Results of PBT and vPvB assessment

Assessment / classification

No information available.

12.6. Endocrine disrupting properties

No information available.

12.7. Other adverse effects

No information available.

12.8. Additional ecotoxicological information

propan-2-ol (CAS: 67-63-0) (EC: 200-661-7)

	Value	Concentration	Test duration	Temperature	Method	Source	Remark
Chemical oxygen demand (COD)	2.23 g O2/g			20 °C	Regulation (EC) No. 440/2008, Annex, C.5 (BOD)	European Chemicals Agency (ECHA)	literature value

12.9. General information

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Directive 2008/98/EC (Waste Framework Directive)

Before intended use

No information available.

Waste codes / waste designations according to EWC / AVV

No information available.

After intended use

Hazardous waste according to Directive 2008/98/EC (waste framework directive).

Waste codes / waste designations according to EWC / AVV

No information available.

Remark

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Other disposal recommendations

Dispose of waste according to applicable legislation.

Additional information

No information available.

SECTION 14: Transport information

	Land transport (ADR/RID)	Inland waterway transport (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI/IATA-DGR)

14.1. UN number	1993	1993	1993	1993
14.2. UN proper shipping name	FLAMMABLE LIQUID, N.O.S.	FLAMMABLE LIQUID, N.O.S.	FLAMMABLE LIQUID, N.O.S.	FLAMMABLE LIQUID, N.O.S.
14.3. Transport hazard class(es)	3	3	3	3
14.4. Packing group	III	III	III	III
14.5. Environmental hazards	Non-environmentally hazardous according to the dangerous goods regulations	Non-environmentally hazardous according to the dangerous goods regulations	Non-environmentally hazardous according to the dangerous goods regulations	Non-environmentally hazardous according to the dangerous goods regulations

14.6. Special precautions for user

No information available.

14.7. Maritime transport in bulk according to IMO instruments

No transport as bulk according to IBC Code.

No information available.

14.8. Additional information

All transport carriers

No dangerous good in sense of these transport regulations.

Land transport (ADR/RID)

Hazard label(s): 3

Limited quantity (LQ): 5 l

Excepted Quantities (EQ): E1

Special Provisions: 274601

Tunnel restriction code: (D/E)

Classification code: F1

Transport category: 3

Hazard identification number (Kemler No.): 3

Inland waterway transport (ADN)

Hazard label(s): 3

Limited quantity (LQ): 5 l

Excepted Quantities (EQ): E1

Special Provisions: 274601

Classification code: F1

Sea transport (IMDG)

Hazard label(s): 3 (–)

Limited quantity (LQ): 5 L

Excepted Quantities (EQ): E1

Special Provisions: 223|274|955

EmS: F-E, S-E

MFAG: –

Air transport (ICAO-TI/IATA-DGR)

Hazard label(s): 3 ()

Limited quantity (LQ): 10 L

Special Provisions: A3

SECTION 15: Regulatory information

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

Restrictions on use

No information available.

Restrictions of occupation

No information available.

Other regulations (EU)

No information available.

Regulation (EC) No. 648/2004 [Detergents Regulation]

Special labelling required: see subsection 2.2 (other labelling) for further information.

15.2. Chemical Safety Assessment

No information available.

15.3. Additional information

No information available.

SECTION 16: Other information

16.1. List of relevant hazard statements and/or precautionary statements from sections 2 to 15

Flam. Liq. 3

Eye Irrit. 2 | H319

H226	Flammable liquid and vapour.
H319	Causes serious eye irritation.

16.2. Classification for mixtures and used evaluation method according to regulation (EC) 1272/2008 [CLP]

No information available.

16.3. Training advice

No information available.

16.4. Key literature references and sources for data

No information available.

16.5. Abbreviations and acronyms

(Q)SAR	Qualitative structure activity relationship, mathematical method to predict e.g. biological activity based on chemical structure
ABS	Absorption
AC	Article category
ACGIH	American Conference of Governmental Industrial Hygienists. An organization of professionals in governmental agencies or educational institutions engaged in occupational safety and health programs. ACGIH develops and publishes recommended occupational exposure limits for chemical substances and physical agents.
ACID	Any chemical which undergoes dissociation in water with the formation of hydrogen ions. Acids have a sour taste and may cause severe burns. They turn litmus paper red and have ph values of 0 to 6. Acids will neutralize bases or alkaline media. Acids will react with a base to form a salt.
ADME	Absorption, distribution, metabolism, and excretion
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADNR	Accord Européen relatif au Transport International des Marchandises Dangereuses par voie de Navigation du Rhin
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ADR/RID/ADN	European Agreements concerning the International Carriage of Dangerous Goods by Road/Rail/Inland Waterways (ADR/RID/ADN)
AF	Assessment factor
ANSI	American National Standards Institute. A privately funded organization that identifies industrial/public national consensus standards and coordinates their development.
API	American Petroleum Institute is an organization of the petroleum industry.
AQTX	Aquatic Toxicity. Adverse effects on marine life that result from their being exposed to a toxic substance.
AS	Allometric scaling
ASTM	American Society for Testing and Materials.
ATE	Acute Toxicity Estimate
AUC	Area under the curve; area under the blood/plasma concentration curve vs. time curve, representing the total amount of substance reaching the blood/plasma
BAL	British Anti-Lewisite. A name for the drug dimecaprol--a treatment for toxic inhalations.
BCF	Bio concentration factor
BCM	Blood-clotting mechanism effects.
BEI	Biological Exposure Indexes. Numerical values based on procedures to determine the amount of a material absorbed into the human body by measuring it or its metabolic products in tissue, fluid or exhaled air.
BMD	Benchmark dose; The BMD concept involves fitting a mathematical model to dose-response data. The BMD is defined as the dose causing a predetermined change in response
BMD10	The benchmark-dose associated with a 10% response (for tumours upon lifetime exposure after correction for spontaneous incidence, for other effects in a specified study)
BMDL10	The lower 95% confidence interval of a benchmark-dose representing a 10% response (e.g., tumour response upon lifetime exposure), i.e. the lower 95% confidence interval of a BMD10
BMF	Bio magnification factor
BP	Boiling Point. Temperature at which a liquid changes to a vapor state at a given pressure. Flammable materials with low boiling points generally present special fire hazards.
BREF	Best available technique reference document
BSAF	Biological soil accumulation factor
BTU	British Thermal Unit. Quantity of heat required to raise the temperature of 1 pound of water 1 degree F at 39.2F, its temperature of maximum density.
Bw	Body weight
C	Centigrade, a unit of temperature.
CAD	Chemical Agents Directive
CAS	Chemical Abstracts Service Number. An assigned number used to identify a chemical. CAS stands for Chemical Abstracts Service, an organization that indexes information published in Chemical Abstracts by the American Chemical Society and that provides index guides by which information about particular substances may be located in the abstracts. Sequentially assigned CAS numbers identify specific chemicals, except when followed by an asterisk(*) which signifies a compound (often naturally occurring) of variable composition. the numbers have no chemical significance. The CAS number is a concise, unique means of material identification.
CBI	Confidential business information

CC	Closed cup. Identifies one of the methods used to measure flash points of flammable liquids.
cc (cm3)	Cubic centimeter.
CEN	Comité Européen de Normalisation (European Committee for Standardization)
CFC	Chlorofluorocarbon. Associated with damage to the Earth's ozone layer.
CFR	Code of Federal Regulations. A collection of the regulations established by law.
cgs	Metric units of measure based upon centimeter, gram, and second.
CGS	Control guidance sheets
CHEMTREC	24-hour toll free telephone number (800-424-9300), intended primarily for use by those who respond to chemical transportation emergencies. Established by the Chemical Manufacturer's Association.
CHP	Chemical Hygiene Plan. Per 29 CFR 1910.1450, OSHA standard; "Occupational Exposures to Hazardous Chemicals in Laboratories." Effective 5/1/90. A written plan that includes specific work practices, standard operating procedures, equipment, engineering controls, and policies to ensure that employees are protected from hazardous exposure levels to all potentially hazardous chemicals in use in their work areas. The OSHA standard provides for training, employee access to information, medical consultations, examinations, hazard identification procedures, respirator use, and record keeping practices.
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
Cmax	Peak plasma concentration
CN Code	Combined Nomenclature
CNS	Central Nervous System, the brain and spinal cord.
CSA	Chemical safety assessment
CSR	Chemical safety report
cu ft (ft3)	Cubic foot. Cu ft is more usual.
cu m (m3)	Cubic meter. m3 is preferred.
DGR	Dangerous Goods Regulations (see IATA/DGR)
DMEL	Derived minimum effect level
DNEL	Derived No-Effect Level
DPD	Directive 1999/45/EC (Dangerous Preparations Directive, DPD).
DSC	Differential Scanning Calorimetry
DSD	Directive 67/548/EEC (Dangerous Substances Directive, DSD)
DU	Downstream user
DU-CSA	Downstream user chemical safety assessment
DU-TGD	Downstream user technical guidance document
EASE	Estimation and assessment of substance exposure
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EC50	Effective Concentration. Concentration of a material in water, a single dose which is expected to cause a biological effect on 50% of a group of test animals.
ECHA	European Chemicals Agency
ED10	Effective dose 10 %; a dose representing an in-creased incidence of 10% due to a specific exposure (e.g. to a chemical).
EFSA	European Food Safety Authority
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
ELR	Excess lifetime risk; additional lifetime risk over the background normal risk (or incidence of disease)
EmS	Emergency Schedule
EPIWIN	Estimation Program Interface for Windows
EPL	Exposure predictor band liquid

EPS	Exposure predictor band solid
ERC	Environmental release class
ES	Exposure scenario
ESD	Emission scenario document
EUSES	European System for the Evaluation of Substances
EWL	European waste list
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act requires that certain useful poisons, such as chemical pesticides, sold to the public contain labels that carry health hazard warnings to protect users. It is administered by EPA.
FOG	Visible suspension of fine droplets in a gas.
g	Gram. Metric unit of weight.
GDMF	General decision making framework
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
GHS	Globally Harmonised System of Classification and Labelling of Chemicals
GLP	Good Laboratory Practice
HBMD10	Human BMD10
HevE	Human exposure via environment
HH	Human health
HS	Harmonized Commodity Description and Coding System (Harmonized System, drawn up by the World Customs Organisation)
HSE	Health safety environment
HT25	Human T25
HtLF	High to low dose risk extrapolation factor
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
IC	Industry category
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IDLH	Immediately Dangerous to Life and Health. Maximum concentration from which one could escape within 30 minutes without any escape-impairing symptoms or any irreversible health effects.
IMDG	International Maritime Dangerous Goods
IMDG-Code	International Maritime Dangerous Goods Code
IOELV	Indicative occupational exposure limit value
IPPC	Integrated pollution prevention and control
ISO	International Standards Organisation
ITS	Integrated testing strategy
LC50	Median Lethal Concentration. The atmospheric concentration found to be lethal to 50 percent of a group of test animals exposed for the specified time period.
LCLO	Lethal concentration low. The lowest concentration of a substance in air reported to have caused death in humans or animals. The reported concentrations may be entered for periods of exposure that are less than 24 hr (acute) or greater than 24 hr (subacute and chronic).
LCS	Life cycle stage
LD50	Median Lethal Dose. The dose found to be lethal in 50 percent of a group of test animals when administered by the specified route, e.g., oral or dermal.
LDLO	Lethal dose low. The lowest dose of a substance introduced by any route, other than inhalation, reported to have caused death in humans or animals.
LED10	Lowest confidence limit of the ED10
LEL	Lower Explosive (Flammable) Limit. Lowest concentration (lowest percentage of the substance in air) that will produce a flash of fire when an ignition source (heat, electric arc, or flame) is present.

LEV	Local exhaust ventilation
LMS	Linear multistage model
LOQ	Limit of quantitation
M/I	Manufacturer / importer
MAAC	Maximum Acceptable Ambient Concentration. The maximum allowable twenty-four hour average concentration, in ambient air, of a toxic air contaminant.
mg	Milligram (1/1000, 10-3, of a gram).
mg/kg	Milligram per kilogram. Dosage used in toxicology testing to indicate a dose administered per kg of body weight.
mg/m3	Milligram per cubic meter of air. mg/m3 = ppm x MW/24.45 at 25 C.
Microgram (ug)	One-millionth (10-6) of a gram.
Micrometer (um)	One-millionth (10-6) of a meter; often referred to as a micron.
Millimeter (mm)	1/1000 of a meter.
ml	Milliliter. 1/1000 of a liter. A metric unit of capacity, for all practical purposes equal to 1 cubic centimeter. One cubic inch is about 16 ml.
mm Hg	A measure of pressure in millimeters of a mercury column above a reservoir, or difference of level in a U-tube.
MMAD	Mass median aerodynamic diameter
MoA	Mode of action
MoE	Margin of exposure
mppcf	Millions of particles per cubic foot of air, based on impinger samples counted by light-field techniques (OSHA).
MTD	Maximum tolerated dose
n-	Normal.Used as a prefix in chemical names signifying a straight-chain structure.
NACE	Nomenclature générale des activités économiques dans les Communautés Européennes
NAEC	No adverse effect concentration
NAEL	No adverse effect level
NLP	No-Longer Polymer
NOAEL	No observed adverse effect level
NOEL	No observed effect level
NOx	A general formula for oxides of nitrogen (NO,NO2). They react with moisture in the respiratory tract to produce acids that corrode and irritate tissue, causing congestion and pulmonary edema. Symptoms of acute exposure can develop over 6 to 24 hours. Chronic exposure to low levels can cause irritation, cough, headache, and tooth corrosion. Exposure to 5 to 50 ppm of NO2 can cause slowly evolving pulmonary edema. Commonly produced by combustion processes, including motor vehicle engines.
OC	Operational condition
OEL	Occupational Exposure Limit. The most restrictive eight-hour time weighted average concentration specified for workroom air selected from either the 1986-1987 Threshold Limit Values and Biological Exposure Indices as adopted by the American Conference of Governmental Industrial Hygienists; the Recommended Standards for Occupational Exposure set forth in the July 1985 summary of National Institute for Occupational Safety and Health Recommendations for Occupational Health Standards; or the 1986 Workplace Environmental Exposure Levels set forth by the American Industrial Hygiene Association.
OR	Odds ratio; the ratio of the odds of an event occurring in one group to the odds of it occurring in another group
ORL	Lowest confidence limit of the OR
OU	Operational unit
PBPK	Physiologically-based pharmacokinetic modelling
PBT	Persistent, Bioaccumulative and Toxic
PBT	Persistent, bioaccumulative, toxic
PC	Chemical product category
PCB	Polychlorinated Biphenyl. Pathogenic and teratogenic compound used as a heat transfer medium. It accumulates in tissue.
PEC	Predicted environmental concentration

PEL	Permissible Exposure Limit. Legally enforced exposure limit for a substance established by OSHA. The PEL indicates the permissible concentration of air contaminants to which nearly all workers may be repeatedly exposed 8 hours a day, 40 hours a week, over a working lifetime (40 years), without adverse effects.
PHLEGM	Thick mucous from the respiratory passage.
PNEC	Predicted No-Effect Concentration
PNEC	Predicted no-effect concentration
POx	A general term for the several oxides of phosphorus.
PPE	Personal Protection Equipment. Devices or clothing worn to help insulate a worker from direct exposure to hazardous materials. Examples include gloves and respirators.
PPM	Parts per million. Unit for measuring concentration of a gas or vapor in air. Parts of the gas or vapor in a million parts of air. Also used to indicate the concentration of a particular substance in a liquid or solid.
PROC	Process category
psia	Pounds per square inch absolute.
psig	Pounds per square inch gauge (i.e., above atmospheric pressure).
QSPR	Quantitative structure–property relationships
RC	Risk characterization
RCR	Risk characterization ratio
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulations Concerning the International Carriage of Dangerous Goods by Rail
RMM	Risk management measure
RQ	Reportable Quantity. Amount of material that when spilled must be reported to the Federal, State, and local authorities under CERCLA, EPCRA, and the CWA.
RR	Relative risk
RRL	Lower bound exposure value associated with the RR-value of 1.1
RSS	Robust study summaries
RTECS	Registry of Toxic Effects of Chemical Substances. Published by NIOSH. Presents basic toxicity data on thousands of materials. Objective is to identify "all known toxic substances" and to reference original studies.
S.I. No. 619 of 2001	Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001
SARA	Superfund Amendments and Reauthorization Act. Signed into law October 17, 1986. Title III of SARA is known as the Emergency Planning and Community Right-to-Know Act of 1986. A revision and extension of CERCLA, SARA is intended to encourage and support local and state emergency planning efforts. It provides citizens and local governments with information about potential chemical hazards in their communities. SARA calls for facilities that store hazardous materials to provide officials and citizens with data on the types (flammables, corrosives, etc.); amounts on hand (daily, yearly); and their specific locations. Facilities are to prepare and submit inventory lists, MSDSs, and tier 1 and 2 inventory forms. The disaster in Bhopal, India in 1987 added impetus to the passage of this law.
SCBA	Self-contained breathing apparatus.
SDS	Safety data sheet
SI	The International System of Units
SIEF	Substance information exchange forum
SME	Small and medium enterprise
SMR	Standardised mortality ratio
SMRL	Lower bound exposure value associated with the SMR-value of 1.1
SOx	Oxides of sulfur where x equals the number of oxygen atoms.
sRV	Standard respiratory volume
STEL	Short-term exposure limit.
STEV	Short-term exposure value.
STP	Sewage treatment plant
SU	Sectors of use
SVHC	Substance of Very High Concern

T25	The chronic dose rate that will give 25% of the animals' tumours at a specific tissue site after correction for spontaneous incidence, within the standard life time of that species
TARIC	Tarif intégré des Communautés Européennes
TG	Test Guideline
TLV	Threshold Limit Value. Airborne concentration of substances established by the American Conference of Governmental Industrial Hygienists, which represent conditions under which it is believed that nearly all workers may be repeatedly exposed day after day without adverse effect.
TLV-C	Ceiling limit, concentration that should not be exceeded even instantaneously.
TLV-STEL	Short term exposure limit, maximum concentration for a continuous 15-minute exposure period.
TLV-TWA	Time-weighted average, concentration for a normal 8-hour work day or 40-hour work week.
TPQ	Threshold Planning Quantity. Per 40 CFR 302. The amount of material at a facility that requires emergency planning and notification per CERCLA.
TSCA	Toxic Substances Control Act. Public Law PL 94-469. Found in 40 CFR 700-799. EPA has jurisdiction. Effective January 1, 1977. Controls the exposure to and use of raw industrial chemicals not subject to other laws. Chemicals are to be evaluated prior to use and can be controlled based on risk. The act provides for a listing of all chemicals that are to be evaluated prior to manufacture or use in the US.
TTC	Threshold of toxicological concern
TWA	Time-weighted average exposure is the airborne concentration of a material to which a person is exposed, averaged over the total exposure time, generally the total workday (8 to 12 hours) .
TWA	Time-weighted average exposure
UC	Use category
UCN	Use code Nordic
UDS	Use descriptor system
UEC	Use and exposure categories
UEL	Upper Explosive (Flammable) Limit. Highest concentration (highest percentage of the substance in air) that will produce a flash of fire when an ignition source (heat, electric arc, or flame) is present.
UN	United Nations
UN RTDG	UN Recommendations on the Transport of Dangerous Goods – Model Regulations. It is regularly updated and amended every two years. More information and the latest revision are available at: http://www.unece.org/trans/danger/publi/unrec/rev13/13nature_e.html
UN-MTC	The UN Manual of Tests and Criteria contains criteria, test methods and procedures to be used for classification of dangerous goods according to the provisions of Parts 2 and 3 of the United Nations Recommendations on the Transport of Dangerous Goods, Model Regulations, as well as of chemicals presenting physical hazards according to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). More information and the latest revision are available at: http://www.unece.org/trans/danger/publi/manual/manual_e.html
USE	To package, handle, react, or transfer.
UVCB	Substances of unknown or variable composition, complex reaction products or biological materials as defined in the Guidance on substance identification
VOC	Volatile Organic Compounds. Used in coatings and paint because they evaporate very rapidly.
vPvB	Very Persistent and very Bioaccumulative
WoE	weight of evidence
wRV	Worker respiratory volume

16.6. Indication of changes

Version	Indication of changes	Revision date
1.0.0		10-05-2024

16.6. Additional information

Follow the instructions for use on the label.

Before using this product, ensure that you read its label and understand its properties.

The information contained in this SDS is, to the best of our knowledge and belief, accurate and reliable at the time of publication. The information relates only to the specific material specified in this SDS and may not apply to that material if used in combination with other materials or for a use other than that specified herein. Neither we nor any of our subsidiaries assume any liability for the use of this product for purposes other than those described in this SDS. This does not affect the legal rights of the user. It is the responsibility of the user to satisfy himself as to the suitability and completeness of this information for his own particular use.

Information contact: +39 080 5035348 | customerservice@rubinochem.it | www.rubinochem.it