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

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

1.1. Product identifier

Trade name/designation:

RAVENOL Klima Fresh & Clean

Other means of identification:
RAVENOL AC-Fresh & Clean

Article No.:
1360075

UFI:
K8S6-X69E-JH2V-TSCC

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

Use of the substance/mixture:
Cleaning agent

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Ravensberger Schmierstoffvertrieb GmbH
Produktsicherheit
Jöllenbecker Str. 2
33824 Werther
Germany
Telephone: +49 5203 9719 0
Telefax: +49 5203 9719 40
E-mail: kontakt@ravenol.de
Website: www.ravenol.de

E-mail (competent person): sdb@ravenol.de

1.4. Emergency telephone number

24 hr. emergency phone number, 24h: +1 872 5888271 (Contract ID: RAV)

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	Hazard statements	Classification procedure
aerosol dispensers and lighters *(Aerosol 1)*	H222; H229: Extremely flammable aerosol. Pressurised container: May burst if heated.	On basis of test data.
Serious eye damage/eye irritation *(Eye Irrit. 2)*	H319: Causes serious eye irritation.	Calculation method.
STOT-single exposure *(STOT SE 3)*	H336: May cause drowsiness or dizziness.	Calculation method.

2.2. Label elements

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

Hazard pictograms:



GHS02
Flame



GHS07
Exclamation mark

Signal word: Danger

Hazard components for labelling:
propan-2-ol

Hazard statements for physical hazards	
H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.

Hazard statements for health hazards	
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Supplemental hazard information: none

Precautionary statements	
P102	Keep out of reach of children.

Precautionary statements Prevention	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P261	Avoid breathing spray.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear eye protection/face protection.

Precautionary statements Response	
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/attention.

Precautionary statements Storage	
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Precautionary statements Disposal	
P501	Dispose of contents/container to an appropriate recycling or disposal facility.

2.3. Other hazards

Other adverse effects:
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 115-10-6 EC No.: 204-065-8 REACH No.: 01-2119472128-37	**dimethyl ether** Flam. Gas 1A (H220), Press. Gas (Liq.) (H280) Danger **Acute Toxicity Estimate** ATE (inhalation, gases) 164,000 ppmV	50 – 100 weight-%
CAS No.: 64-17-5 EC No.: 200-578-6 Index No.: 603-002-00-5 REACH No.: 01-2119457610-43	**ethanol** Flam. Liq. 2 (H225) Danger **Acute Toxicity Estimate** ATE (oral) 10,470 mg/kg ATE (dermal) > 2,000 mg/kg ATE (inhalation, gases) 20,000 ppmV ATE (inhalation, vapour) 124 mg/L	10 – 25 weight-%

Product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 67-63-0 EC No.: 200-661-7 Index No.: 603-117-00-0 REACH No.: 01-2119457558-25	**propan-2-ol** Eye Irrit. 2 (H319), Flam. Liq. 2 (H225), STOT SE 3 (H336)  Danger **Acute Toxicity Estimate** ATE (oral) 5,280 mg/kg ATE (dermal) > 2,000 mg/kg ATE (inhalation, vapour) 47.5 mg/L	10 – 25 weight-%
CAS No.: 107-98-2 EC No.: 203-539-1 Index No.: 603-064-00-3 REACH No.: 01-2119457435-35	**1-methoxypropan-2-ol** Flam. Liq. 3 (H226), STOT SE 3 (H336)  Warning **Acute Toxicity Estimate** ATE (oral) 5,000 mg/kg ATE (dermal) 13,500 mg/kg ATE (inhalation, vapour) 37 mg/L	2.5 – 10 weight-%
CAS No.: 7664-41-7 EC No.: 231-635-3 Index No.: 007-001-00-5 REACH No.: 01-2119488876-14	**ammonia, anhydrous** Acute Tox. 3 (H331), Aquatic Acute 1 (H400), Flam. Gas 2 (H221), Press. Gas (Liq.) (H280), Skin Corr. 1B (H314)  Danger M-factor (acute): 1 **Acute Toxicity Estimate** ATE (oral) 350 mg/kg ATE (inhalation, vapour) 2,000 mg/L	< 1 weight-%

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove victim out of the danger area. Remove contaminated, saturated clothing. If unconscious but breathing normally, place in recovery position and seek medical advice. Do not leave affected person unattended.

Following inhalation:
Provide fresh air. If breathing is irregular or stopped, administer artificial respiration.
Consult a doctor immediately in the case of inhaling spray mist and show him packing or label.
May cause drowsiness or dizziness.

In case of skin contact:
After contact with skin, wash immediately with plenty of water and soap. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention. Causes skin irritation.

After eye contact:
After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately. Remove contact lenses, if present and easy to do. Continue rinsing.

Following ingestion:
Rinse mouth thoroughly with water. Do NOT induce vomiting. Consult a doctor immediately.

Self-protection of the first aider:
Use personal protection equipment. No direct artificial respiration to be given by first aider.

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

The following symptoms may occur: Headache, Dizziness, Nausea, fatigue
May cause drowsiness or dizziness.
Causes skin irritation.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
Co-ordinate fire-fighting measures to the fire surroundings.
Carbon dioxide (CO2)
Extinguishing powder

alcohol resistant foam
Use water spray jet to protect personnel and to cool endangered containers.

Unsuitable extinguishing media:
Full water jet

5.2. Special hazards arising from the substance or mixture
Extremely flammable aerosol. Pressurized container: May burst if heated.

Hazardous combustion products:
Nitrogen oxides (NOx), Carbon monoxide, Carbon dioxide (CO_2), aldehydes, carbon black, Gases/vapours, toxic

5.3. Advice for firefighters
In case of fire: Wear self-contained breathing apparatus.

5.4. Additional information
Move undamaged containers from immediate hazard area if it can be done safely. Do not inhale explosion and combustion gases. Use water spray jet to protect personnel and to cool endangered containers. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
Personal precautions:
Use personal protection equipment. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Protective equipment:
Personal protection equipment: see section 8

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

6.1.2. For emergency responders
Personal protection equipment:
Use appropriate respiratory protection.

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

6.3. Methods and material for containment and cleaning up
For containment:
Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up:
Clean contaminated articles and floor according to the environmental legislation.

Other information:
Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections
Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures
Advices on safe handling:
Pressurised container: May burst if heated. Do not pierce or burn, even after use. If handled uncovered, arrangements with local exhaust ventilation should be used if possible. Do not breathe gas/vapour/aerosol.
Wear personal protection equipment (refer to section 8). When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Do not put any product-impregnated cleaning rags into your trouser pockets. Use appropriate container to avoid environmental contamination.

Fire prevent measures:
Do not spray on naked flames or any incandescent material. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Keep away from sources of ignition - No smoking.

Measures to prevent aerosol and dust generation:
Use only in well-ventilated areas.

Environmental precautions:
Shafts and sewers must be protected from entry of the product.

Advices on general occupational hygiene
Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.

7.2. Conditions for safe storage, including any incompatibilities
Technical measures and storage conditions:
Keep container tightly closed in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Requirements for storage rooms and vessels:
Observe legal regulations and regulations.

Hints on storage assembly:
Do not store together with:
Oxidizing agent
Pyrophoric or self-heating substances
Food and feedingstuffs

Storage class (TRGS 510, Germany): 2B – Aerosol dispensers and lighters

Further information on storage conditions:
Protect against: Frost, UV-radiation/sunlight
maximum storage temperature: 50 °C

7.3. Specific end use(s)
Recommendation:
Observe technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
8.1.1. Occupational exposure limit values

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
CH from 1 Jan 2024	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 1,000 ppm (1,910 mg/m³)
BE	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 1,000 ppm (1,920 mg/m³)
CZ from 1 Jan 2024	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 522 ppm (1,000 mg/m³) ② 1,045 ppm (2,000 mg/m³)
PL	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 1,000 mg/m³
NO	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 200 ppm (384 mg/m³) ⑤ E
TRGS 900 (DE)	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 1,000 ppm (1,900 mg/m³) ② 8,000 ppm (15,200 mg/m³) ⑤ DFG, EU
IE	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 1,000 ppm (1,920 mg/m³) ⑤ IOELV

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
HTP (FI)	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 1,000 ppm (2,000 mg/m³)
LT	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 1,000 ppm (1,920 mg/m³) ② 1,500 ppm (2,280 mg/m³) ⑤
SE	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 500 ppm (950 mg/m³) ③ 800 ppm (1,500 mg/m³)
NPEL (SK)	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 1,000 ppm (1,920 mg/m³)
MAK (AT)	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 1,000 ppm (1,910 mg/m³)
DK from 13 Feb 2021	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 1,000 ppm (1,920 mg/m³) ② 2,000 ppm (3,840 mg/m³) ⑤ E
MAK (AT)	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	② 2,000 ppm (3,820 mg/m³) ⑤ (max. 3x60 min./Schicht, Momentanwert)
BG from 6 Jan 2012	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 1,000 ppm (1,920 mg/m³)
HR	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 1,000 ppm (1,920 mg/m³)
RO	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 1,000 ppm (1,920 mg/m³)
EE	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 1,000 ppm (1,920 mg/m³)
LV	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 1,000 ppm (1,920 mg/m³)
ES	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 1,000 ppm (1,920 mg/m³) ⑤ VLI
BC (CA)	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 1,000 ppm
IOELV (EU)	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 1,000 ppm (1,920 mg/m³)
VRI (FR) from 3 May 2021	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 1,000 ppm (1,920 mg/m³)
WEL (GB)	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 400 ppm (766 mg/m³) ② 500 ppm (958 mg/m³)
SI from 4 Dec 2018	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 1,000 ppm (1,920 mg/m³) ② 8,000 ppm (15,360 mg/m³) ⑤ EU1
IS	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 1,000 ppm (1,885 mg/m³)

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
HU from 1 Apr 2024	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 1,000 ppm (1,920 mg/m³) ⑤ N
RU	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 200 mg/m³ ③ 600 mg/m³
GR from 1 Oct 2016	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 1,000 ppm (1,920 mg/m³)
NL from 1 Jan 2023	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 495 ppm (950 mg/m³) ② 781 ppm (1,500 mg/m³)
TR	**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8	① 1,000 ppm (1,920 mg/m³)
CH from 1 Jan 2025	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 500 ppm (960 mg/m³) ② 1,000 ppm (1,920 mg/m³) ⑤ C1#A R1A SSC; Messmeth: INRS NIOSH
CZ from 1 Mar 2020	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 522 ppm (1,000 mg/m³) ② 1,566 ppm (3,000 mg/m³)
PL	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 1,900 mg/m³
NO	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 500 ppm (950 mg/m³)
IE from 5 Dec 2011	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	② 1,000 ppm
MY from 1 Jan 2000	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 1,000 ppm (1,880 mg/m³)
HTP (FI)	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 1,000 ppm (1,900 mg/m³) ② 1,300 ppm (2,500 mg/m³)
LT	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 500 ppm (1,000 mg/m³) ② 1,000 ppm (1,900 mg/m³)
SE from 22 Aug 2019	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 500 ppm (1,000 mg/m³) ③ 1,000 ppm (1,900 mg/m³)
NPEL (SK) from 23 Nov 2011	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 500 ppm (960 mg/m³) ② 1,000 ppm (1,920 mg/m³)
DK	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 1,000 ppm (1,900 mg/m³) ② 2,000 ppm (3,800 mg/m³)
NL from 1 Jan 2023	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 137 ppm (260 mg/m³) ② 1,000 ppm (1,900 mg/m³) ⑤ (kankerverwekkend, kan door de huid in het lichaam worden opgenomen) H, Lijst B2
MAK (AT)	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 1,000 ppm (1,900 mg/m³)
MAK (AT)	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	② 2,000 ppm (3,800 mg/m³) ⑤ (max. 3x60 min./Schicht, Momentanwert)

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
BG	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 1,000 mg/m³
HR	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 1,000 ppm (1,900 mg/m³)
BE	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 1,000 ppm (1,907 mg/m³)
RO	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 1,000 ppm (1,900 mg/m³) ② 5,000 ppm (9,500 mg/m³)
EE	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 500 ppm (1,000 mg/m³) ② 1,000 ppm (1,900 mg/m³)
Alberta (CA)	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 1,000 ppm (1,880 mg/m³)
LV	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 1,000 mg/m³
ES from 1 Jan 2013	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	② 1,000 ppm (1,910 mg/m³) ⑤ s
BC (CA)	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	② 1,000 ppm
VLA (FR)	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 1,000 ppm (1,900 mg/m³) ② 5,000 ppm (9,500 mg/m³)
SI from 4 Dec 2018	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 500 ppm (960 mg/m³) ② 1,000 ppm (1,920 mg/m³) ⑤ Y
TW	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 1,000 ppm (1,880 mg/m³)
WEL (GB)	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 1,000 ppm (1,920 mg/m³)
KR	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 1,000 ppm (1,900 mg/m³)
IS	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 1,000 ppm (1,900 mg/m³)
HU from 1 Apr 2024	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 1,000 ppm (1,900 mg/m³) ② 2,000 ppm (3,800 mg/m³) ⑤ N
RU	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 1,000 mg/m³ ③ 2,000 mg/m³
GR from 1 Oct 2016	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 1,000 ppm (1,900 mg/m³)
IDLH (US) from 1 Jan 1994	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 3,300 ppm [10% LEL]

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
OSHA (US)	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 1,000 ppm (1,900 mg/m³)
NIOSH (US)	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 1,000 ppm (1,900 mg/m³)
ACGIH (US) from 1 Jan 2016	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	② 1,000 ppm
TRGS 900 (DE) from 29 Mar 2019	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	① 200 ppm (380 mg/m³) ② 800 ppm (1,520 mg/m³) ⑤ DFG, Y
Québec (CA) from 1 Apr 2022	**ethanol** CAS No.: 64-17-5 EC No.: 200-578-6	② 1,000 ppm
BE from 1 Dec 2011	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 200 ppm (500 mg/m³) ② 400 ppm (1,000 mg/m³)
CZ from 20 May 2021	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 200 ppm (500 mg/m³) ② 400 ppm (1,000 mg/m³) ⑤ I
PL from 12 Jun 2018	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 900 mg/m³ ② 1,200 mg/m³ ⑤ (może przenikać przez skórę do organizmu) skóra
NO	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 100 ppm (245 mg/m³)
IE from 17 Jan 2020	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 200 ppm ② 400 ppm ⑤ (may be absorbed through the skin) Sk
HTP (FI)	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 200 ppm (500 mg/m³) ② 250 ppm (620 mg/m³)
LT	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 150 ppm (350 mg/m³) ② 250 ppm (600 mg/m³) ⑤
SE	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 150 ppm (350 mg/m³) ③ 250 ppm (600 mg/m³)
MY from 1 Jan 2000	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 400 ppm (983 mg/m³)
NPEL (SK) from 23 Nov 2011	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 200 ppm (500 mg/m³) ② 400 ppm (1,000 mg/m³)
MAK (AT)	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	② 800 ppm (2,000 mg/m³) ⑤ (max. 4x15 min./Schicht)
BG from 17 Jan 2020	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 980 mg/m³ ② 1,225 mg/m³
DK	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 200 ppm (490 mg/m³) ② 400 ppm (980 mg/m³)

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
HR	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 400 ppm (999 mg/m³) ② 500 ppm (1,250 mg/m³)
CN	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 350 mg/m³ ② 700 mg/m³
RO	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 81 ppm (200 mg/m³) ② 203 ppm (500 mg/m³)
ES from 1 Jan 2011	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 200 ppm (500 mg/m³) ② 400 ppm (1,000 mg/m³) ⑤ VLB®, s
EE	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 150 ppm (350 mg/m³) ② 250 ppm (600 mg/m³)
Alberta (CA)	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 200 ppm (492 mg/m³) ② 400 ppm (984 mg/m³)
LV	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 350 mg/m³ ② 600 mg/m³
BC (CA)	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 200 ppm ② 400 ppm
REL (JP)	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	③ 400 ppm (980 mg/m³)
VLA (FR)	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	② 400 ppm (980 mg/m³)
MAK (AT)	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 200 ppm (500 mg/m³)
SI from 4 Oct 2018	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 200 ppm (500 mg/m³) ② 400 ppm (1,000 mg/m³) ⑤ Y, BAT
WEL (GB)	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 400 ppm (999 mg/m³) ② 500 ppm (1,250 mg/m³)
TW	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 400 ppm (983 mg/m³)
KR	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 200 ppm (480 mg/m³) ② 400 ppm (980 mg/m³)
IS	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 200 ppm (490 mg/m³) ⑤ (efnið getur auðveldlega borist inn í líkamann gegnum húð) H
CH from 1 Jan 2024	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 200 ppm (500 mg/m³) ② 400 ppm (1,000 mg/m³) ⑤ SSC B; Messmeth: INRS NIOSH
HU from 1 Apr 2024	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 200 ppm (500 mg/m³) ② 400 ppm (1,000 mg/m³) ⑤ (felvehető a bőrön keresztül) b, i, R

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
RU	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 10 mg/m³ ③ 50 mg/m³
GR from 1 Oct 2016	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 400 ppm (980 mg/m³) ② 500 ppm (1,225 mg/m³)
IDLH (US) from 1 Jan 1994	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 2,000 ppm [10% LEL]
Québec (CA) from 1 Apr 2022	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 200 ppm ② 400 ppm
OSHA (US)	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 400 ppm (980 mg/m³)
NIOSH (US)	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 400 ppm (980 mg/m³) ② 500 ppm (1,225 mg/m³)
ACGIH (US) from 1 Mar 2014	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 200 ppm (492 mg/m³) ② 400 ppm (984 mg/m³)
TRGS 900 (DE)	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	① 200 ppm (500 mg/m³) ② 400 ppm (1,000 mg/m³) ⑤ DFG, Y
BE from 3 Oct 2018	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 50 ppm (184 mg/m³) ② 100 ppm (369 mg/m³) ⑤ (peut être absorbé par la peau) D
CZ from 1 Jan 2024	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 72.09 ppm (270 mg/m³) ② 146.84 ppm (550 mg/m³) ⑤ (může pronikat pokožkou) D
TRGS 900 (DE)	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 100 ppm (370 mg/m³) ② 200 ppm (740 mg/m³) ⑤ DFG, EU, Y
PL from 12 Jun 2018	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 180 mg/m³ ② 360 mg/m³ ⑤ (może przenikać przez skórę do organizmu) skóra
NO	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 50 ppm (180 mg/m³) ⑤ (kan absorberes gjennom huden) HE
IE from 4 May 2010	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 100 ppm (375 mg/m³) ② 150 ppm (568 mg/m³) ⑤ IOELV
HTP (FI)	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 100 ppm (370 mg/m³) ② 150 ppm (560 mg/m³) ⑤ (voivat imeytyä ihon läpi) iho
DK from 28 Jun 2022	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 50 ppm (185 mg/m³) ② 150 ppm (568 mg/m³) ⑤ (kan optages gennem huden) EH
LT from 1 Nov 2011	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 50 ppm (190 mg/m³) ② 75 ppm (300 mg/m³) ⑤ (tikėtinas įsisavinimas per odą) O

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
SE from 1 Jun 2016	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 50 ppm (190 mg/m³) ② 150 ppm (568 mg/m³) ⑤ (kan absorberas genom huden)
NPEL (SK) from 23 Nov 2011	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 100 ppm (375 mg/m³) ② 150 ppm (568 mg/m³) ⑤ (rátajte so vstrebávaním cez pokožku) K
BG	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 100 ppm (375 mg/m³) ② 150 ppm (568 mg/m³) ⑤ (трябва да се очаква абсорбиране през кожата)
HR	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 100 ppm (375 mg/m³) ② 150 ppm (568 mg/m³)
ES	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 100 ppm (375 mg/m³) ② 150 ppm (568 mg/m³) ⑤ (puede ser absorbido a través dérmica) vía dérmica, VLI
RO from 21 Aug 2018	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 100 ppm (375 mg/m³) ② 150 ppm (568 mg/m³) ⑤ (e de asteptat asimilarea prin piele) P
EE from 17 Jan 2020	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 100 ppm (375 mg/m³) ② 150 ppm (568 mg/m³) ⑤ S
LV	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 100 ppm (375 mg/m³) ② 150 ppm (568 mg/m³) ⑤ (var absorbet caur adu) Āda
Alberta (CA)	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 100 ppm (369 mg/m³) ② 150 ppm (553 mg/m³)
BC (CA) from 1 Jun 2018	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 50 ppm ② 100 ppm
IOELV (EU)	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 100 ppm (375 mg/m³) ② 150 ppm (568 mg/m³) ⑤ (may be absorbed through the skin)
VRC (FR) from 1 Jun 2008	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 50 ppm (188 mg/m³) ② 100 ppm (375 mg/m³) ⑤ (peut être absorbé par la peau)
MAK (AT)	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 50 ppm (187 mg/m³) ② 50 ppm (187 mg/m³) ⑤ (Momentanwert, kann über die Haut aufgenommen werden) H
WEL (GB)	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 100 ppm (375 mg/m³) ② 150 ppm (560 mg/m³) ⑤ (may be absorbed through the skin)
SI from 4 Dec 2018	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 100 ppm (375 mg/m³) ② 150 ppm (568 mg/m³) ⑤ (računati je treba z možnostjo prodiranja skozi kožo) K, Y, BAT, EU1
TW	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 100 ppm (369 mg/m³)

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
KR	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 100 ppm (360 mg/m³) ② 150 ppm (540 mg/m³)
HU from 1 Apr 2024	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 100 ppm (375 mg/m³) ② 150 ppm (568 mg/m³) ⑤ (felvehető a bőrön keresztül) b, R+T
IS	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 50 ppm (185 mg/m³) ② 150 ppm (568 mg/m³) ⑤ (efnið getur auðveldlega borist inn í líkamann gegnum húð) H
MY from 1 Jan 2000	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 100 ppm (369 mg/m³)
NL from 1 Jan 2023	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 100 ppm (375 mg/m³) ② 150 ppm (563 mg/m³) ⑤ (kan door de huid in het lichaam worden opgenomen) H
GR from 1 Oct 2016	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 100 ppm (360 mg/m³) ② 300 ppm (1,080 mg/m³) ⑤ (αναμένετε απορρόφηση από το δέρμα)
TR	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 100 ppm (375 mg/m³) ② 150 ppm (568 mg/m³) ⑤ (cilt yoluyla alınabilir) Deri
Québec (CA) from 14 Mar 2024	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 50 mg/m³ ② 100 mg/m³
NIOSH (US)	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 100 ppm (360 mg/m³) ② 150 ppm (540 mg/m³)
ACGIH (US) from 1 Jan 2013	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 50 ppm (184 mg/m³) ② 100 ppm (369 mg/m³)
CH from 1 Jan 2024	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	① 100 ppm (360 mg/m³) ② 200 ppm (720 mg/m³) ⑤ SSC B
CH from 1 Jan 2024	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 20 ppm (14 mg/m³) ② 40 ppm (28 mg/m³) ⑤ SSC; Messmeth: NIOSH OSHA
MAK (AT)	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 20 ppm (14 mg/m³)
BE	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 20 ppm (14 mg/m³) ② 50 ppm (36 mg/m³)
CZ from 1 Jan 2024	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 20 ppm (14 mg/m³) ② 50 ppm (36 mg/m³) ⑤ I
PL	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 14 mg/m³ ② 28 mg/m³
NO from 1 Jan 2013	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 15 ppm (11 mg/m³) ② 50 ppm (36 mg/m³) ⑤ E2S

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
IE from 4 May 2010	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 20 ppm (14 mg/m³) ② 50 ppm (36 mg/m³) ⑤ IOELV
HTP (FI)	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 20 ppm (14 mg/m³) ② 50 ppm (36 mg/m³)
LT	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 20 ppm (14 mg/m³) ② 50 ppm (36 mg/m³) ⑤
SE from 21 Aug 2018	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 20 ppm (14 mg/m³) ② 50 ppm (36 mg/m³)
NPEL (SK) from 23 Nov 2011	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 20 ppm (14 mg/m³) ② 50 ppm (36 mg/m³)
DK from 28 Jun 2022	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 20 ppm (14 mg/m³) ② 50 ppm (36 mg/m³) ⑤ E
MAK (AT)	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	② 50 ppm (36 mg/m³) ⑤ (max. 4x15 min./Schicht)
BG from 6 Jan 2012	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 20 ppm (14 mg/m³) ② 50 ppm (36 mg/m³)
HR	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 20 ppm (14 mg/m³) ② 50 ppm (36 mg/m³)
ES	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 20 ppm (14 mg/m³) ② 50 ppm (36 mg/m³) ⑤ VLI
RO	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 20 ppm (14 mg/m³) ② 50 ppm (36 mg/m³)
EE	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 20 ppm (14 mg/m³) ② 50 ppm (36 mg/m³)
LV from 1 Feb 2011	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 20 ppm (14 mg/m³) ② 50 ppm (36 mg/m³)
Alberta (CA)	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 25 ppm (17 mg/m³) ② 35 ppm (24 mg/m³)
BC (CA)	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 25 ppm ② 35 ppm
IOELV (EU)	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 20 ppm (14 mg/m³) ② 50 ppm (36 mg/m³)
VRC (FR)	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 10 ppm (7 mg/m³) ② 20 ppm (14 mg/m³)
REL (JP)	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 25 ppm (17 mg/m³)
WEL (GB)	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 25 ppm (18 mg/m³) ② 35 ppm (25 mg/m³)

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
SI from 4 Dec 2018	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 20 ppm (14 mg/m³) ② 50 ppm (36 mg/m³) ⑤ Y, EU1
TW	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 50 ppm (35 mg/m³)
KR	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 25 ppm (18 mg/m³) ② 35 ppm (27 mg/m³)
IS	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 20 ppm (14 mg/m³) ② 50 ppm (36 mg/m³) ⑤ (efnið getur auðveldlega borist inn í líkamann gegnum húð) H
HU from 1 Apr 2024	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 20 ppm (14 mg/m³) ② 50 ppm (36 mg/m³) ⑤ m, N
CN from 1 Jan 2007	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 20 mg/m³ ② 30 mg/m³
GR from 1 Oct 2016	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 50 ppm (35 mg/m³) ② 50 ppm (35 mg/m³)
NL from 1 Jan 2023	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 20 ppm (14 mg/m³) ② 50 ppm (36 mg/m³)
TR	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 20 ppm (14 mg/m³) ② 50 ppm (36 mg/m³)
RU	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	③ 20 mg/m³
OSHA (US)	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 50 ppm (35 mg/m³)
NIOSH (US)	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 25 ppm (18 mg/m³) ② 35 ppm (27 mg/m³)
ACGIH (US) from 1 Mar 2014	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 25 ppm (17 mg/m³) ② 35 ppm (24 mg/m³)
Québec (CA)	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 25 ppm (17 mg/m³) ② 35 ppm (24 mg/m³)
MY from 1 Jan 2000	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 25 ppm (17 mg/m³)
TRGS 900 (DE)	**ammonia, anhydrous** CAS No.: 7664-41-7 EC No.: 231-635-3	① 20 ppm (14 mg/m³) ② 40 ppm (28 mg/m³) ⑤ DFG, EU, Y

8.1.2. Biological limit values

Limit value type (country of origin)	Substance name	Limit value	① Parameter ② Test material ③ Time of sampling: ④ Remark
BAT (CH) from 1 Jan 2011	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	25 mg/L	① Aceton ② Urin ③ Expositionsende bzw. Schichtende
BAT (CH) from 1 Jan 2011	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	25 mg/L	① Aceton ② Blut ③ Expositionsende bzw. Schichtende
VLB (ES)	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	40 mg/L	① acetona ② orina ③ en caso de exposición por largo tiempo, fin de exposición o fin de turno
TRGS 903 (DE) from 1 Nov 2012	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	25 mg/L	① Aceton ② Blut ③ Expositionsende bzw. Schichtende
TRGS 903 (DE) from 1 Nov 2012	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	25 mg/L	① Aceton ② Urin ③ Expositionsende bzw. Schichtende
ACGIH-BEI (US)	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	40 mg/L	① Acetone in urine ② urine ③ end of shift at end of work week
VLBO (RO)	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	50 mg/L	① Alcohol izopropilic ② urina ③ finalul expunerii, resp. finalul schimbului
BAT (SI) from 4 Dec 2018	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	25 mg/L	① aceton ② kri ③ ob koncu delovne izmene
BAT (SI) from 4 Oct 2018	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	25 mg/L	① aceton ② urin ③ ob koncu delovne izmene
BIO (HU) from 7 Feb 2020	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	25 mg/L	① Aceton ② vizelet ③ expozíció vége illetve műszak vége
BIO (HR)	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	50 mg/L	① aceton ② krv ③ kraj izloženosti, odnosno kraj smjene
BIO (HR)	**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7	50 mg/L	① aceton ② urin ③ kraj izloženosti, odnosno kraj smjene
BAT (CH)	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	20 mg/L	① 1-Methoxypropan-2-ol ② Urin ③ Expositionsende bzw. Schichtende
TRGS 903 (DE) from 10 Oct 2024	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	15 mg/L	① 1-Methoxypropanol-2 ② Urin ③ Expositionsende bzw. Schichtende

Limit value type (country of origin)	Substance name	Limit value	① Parameter ② Test material ③ Time of sampling: ④ Remark
BAT (SI) from 4 Dec 2018	**1-methoxypropan-2-ol** CAS No.: 107-98-2 EC No.: 203-539-1	15 mg/L	① 1-metoksipropan-2-ol ② urin ③ ob koncu delovne izmene

8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
ethanol CAS No.: 64-17-5 EC No.: 200-578-6	950 mg/m³	① DNEL worker ② Long-term – inhalation, systemic effects
ethanol CAS No.: 64-17-5 EC No.: 200-578-6	114 mg/m³	① DNEL Consumer ② Long-term – inhalation, systemic effects
ethanol CAS No.: 64-17-5 EC No.: 200-578-6	1,900 mg/m³	① DNEL worker ② Acute - inhalation, local effects
ethanol CAS No.: 64-17-5 EC No.: 200-578-6	950 mg/m³	① DNEL Consumer ② Acute - inhalation, local effects
ethanol CAS No.: 64-17-5 EC No.: 200-578-6	343 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
ethanol CAS No.: 64-17-5 EC No.: 200-578-6	206 mg/kg bw/day	① DNEL Consumer ② Long-term - dermal, systemic effects
1-methoxypropan-2-ol CAS No.: 107-98-2 EC No.: 203-539-1	369 mg/m³	① DNEL worker ② Long-term – inhalation, systemic effects

8.2. Exposure controls

8.2.1. Appropriate engineering controls

See section 7. No additional measures necessary.

8.2.2. Personal protection equipment



Eye/face protection:

Suitable eye protection: Eye glasses with side protection
DIN-/EN-Norms EN 166

Skin protection:

Hand protection
Suitable material: NBR (Nitrile rubber), PVC (polyvinyl chloride), CR (polychloroprene, chloroprene rubber)
Thickness of the glove material: ≥ 0,4 mm
Breakthrough time: 480 min
Breakthrough times and swelling properties of the material must be taken into consideration.
The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.
For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.
Tested protective gloves must be worn: EN ISO 374
Suitable protective clothing: Protective clothing

Respiratory protection:

Wear breathing apparatus if exposed to vapours/dusts/aerosols.
Suitable respiratory protection apparatus: Combination filtering device
Filtering device with filter or ventilator filtering device of type: A2-P2
Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

8.2.3. Environmental exposure controls
See section 7. No additional measures necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance
Physical state: Liquid
Form: Aerosol
Colour: colourless
Odour: fruity
flammability: Yes

Safety relevant basis data

Parameter	Value	at °C	① Method ② Remark
pH	*not applicable*		
Melting point	*No data available*		
Freezing point	*No data available*		
Initial boiling point and boiling range	*No data available*		
Flash point	*No data available*		
Evaporation rate	*No data available*		
Auto-ignition temperature	*No data available*		
Upper/lower flammability or explosive limits	3.3 – 26.2 Vol-%		② applies to the propellant gas
Vapour pressure	< 1 hPa	50 °C	
Vapour density	*No data available*		
Density	0.808 g/cm³	20 °C	
Bulk density	*not applicable*		
Water solubility	*No data available*		
Dynamic viscosity	*No data available*		
Kinematic viscosity	*No data available*		

9.2. Other information
Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity
Extremely flammable aerosol.

10.2. Chemical stability
The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions
Extremely flammable aerosol. Pressurized container: May burst if heated. Do not expose to temperatures above 50 °C.Heating causes rise in pressure with risk of bursting.

10.4. Conditions to avoid
Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air. Take precautionary measures against static discharge.

10.5. Incompatible materials
Oxidizing agent,
Pyrophoric or self-heating substances

10.6. Hazardous decomposition products
Nitrogen oxides (NOx), Carbon monoxide, Carbon dioxide (CO2), carbon black, aldehydes
Gases/vapours, toxic

Further information
Do not mix with other chemicals.

SECTION 11: Toxicological information

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

dimethyl ether CAS No.: 115-10-6 EC No.: 204-065-8	
LC_{50} Acute inhalation toxicity (gas): 164,000 ppmV 4 h (Ratte) OECD 403	
ethanol CAS No.: 64-17-5 EC No.: 200-578-6	
LD_{50} oral: 10,470 mg/kg (Rat)	
LD_{50} dermal: >2,000 mg/kg (Rabbit)	
LC_{50} Acute inhalation toxicity (gas): 20,000 ppmV 4 h (rat)	
LC_{50} Acute inhalation toxicity (vapour): 124 mg/L (Mouse)	
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	
LD_{50} oral: 5,280 mg/kg (Rat)	
LD_{50} dermal: >2,000 mg/kg	
LC_{50} Acute inhalation toxicity (vapour): 47.5 mg/L 4 h (Rat)	
1-methoxypropan-2-ol CAS No.: 107-98-2 EC No.: 203-539-1	
LD_{50} oral: 5,000 mg/kg (Rat)	
LD_{50} dermal: 13,500 mg/kg	
LC_{50} Acute inhalation toxicity (vapour): 37 mg/L 4 h (Rat)	
ammonia, anhydrous CAS No.: 7664-41-7 EC No.: 231-635-3	
LD_{50} oral: 350 mg/kg (rat)	
LC_{50} Acute inhalation toxicity (vapour): 2,000 mg/L 4 h (rat)	

Acute oral toxicity:
Based on available data, the classification criteria are not met.

Acute dermal toxicity:
Based on available data, the classification criteria are not met.

Acute inhalation toxicity:
Based on available data, the classification criteria are not met.

Skin corrosion/irritation:
Based on available data, the classification criteria are not met.

Serious eye damage/irritation:
Causes serious eye irritation.

Respiratory or skin sensitisation:
Based on available data, the classification criteria are not met.

Germ cell mutagenicity:
Based on available data, the classification criteria are not met.

Carcinogenicity:
Based on available data, the classification criteria are not met.

Reproductive toxicity:
Based on available data, the classification criteria are not met.

STOT-single exposure:
May cause drowsiness or dizziness.

STOT-repeated exposure:
Based on available data, the classification criteria are not met.

Aspiration hazard:
May be fatal if swallowed and enters airways.
Observe risk of aspiration if vomiting occurs.
For viscosity data, see section 9.

Additional information:
No data available

11.2. Information on other hazards

Endocrine disrupting properties:
This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Other information:
No information available.

SECTION 12: Ecological information

12.1. Toxicity

dimethyl ether CAS No.: 115-10-6 EC No.: 204-065-8
LC_{50}: >4,100 mg/L 4 d (fish, Poecilia reticulata) NEN 6504 Water - Determination of acute toxicity with Poecilia reticulata
EC_{50}: 154.917 mg/L 4 d (Algae/water plant, green algae) Data generated using ECOSAR v1.00 (September 2008)
EC_{50}: >4,400 mg/L 2 d (crustaceans, Daphnia magna) NEN6501: Water -Determination of acute toxicity with Daphnia magna
NOEC: ≥4,100 mg/L 4 d (fish, Poecilia reticulata) NEN 6504 Water - Determination of acute toxicity with Poecilia reticulata
NOEC: ≥4,400 mg/L 2 d (crustaceans, Daphnia magna) NEN6501: Water -Determination of acute toxicity with Daphnia magna
ethanol CAS No.: 64-17-5 EC No.: 200-578-6
LC_{50}: 11,000 mg/L 4 d (fish)
LC_{50}: 9,280 mg/L 2 d (crustaceans)
LC_{50}: 13,000 mg/L 4 d (fish, Oncorhynchus mykiss (Rainbow trout))
LC_{50}: 5,012 mg/L
LC_{50}: 11,000 mg/L 4 d (fish)
LC_{50}: 5,012 mg/L 2 d (crustaceans, Ceriodaphnia dubia)
EC_{50}: 9,950 mg/L 2 d (crustaceans)
EC_{50}: 275 mg/L 3 d (Algae/water plant, Chlorella vulgaris)
EC_{50}: >10,000 mg/L 2 d (crustaceans, Daphnia magna (Big water flea))
EC_{50}: 275 mg/L 3 d (Algae/water plant, Chlorella vulgaris)
EC_{50}: 12,340 mg/L 2 d (crustaceans, Daphnia magna (Big water flea))
EC_{50}: 275 mg/L 3 d (Selenastrum capricornutum)
NOEC: 12,340 mg/L 21 d
NOEC: 1,000 mg/L (Danio rerio (zebrafish)) OECD Prüfrichtlinie 212
NOEC: 1,000 mg/L (Danio rerio (zebrafish)) OECD 212
IC_{50}: >1,000 mg/L (Algae/water plant)
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7
LC_{50}: 9,640 mg/L 4 d (fish, Pimephales promelas)
LC_{50}: >1,000 mg/L 4 d (crustaceans, Oncorhynchus mykiss (Rainbow trout))
LC_{50}: >100 mg/L 2 d (fish, Leuciscus idus (golden orfe))
EC_{50}: >100 mg/L 3 d (Algae/water plant, Desmodesmus subspicatus) OECD 401
EC_{50}: 13,299 mg/L 2 d (crustaceans, Daphnia magna)
EC_{50}: >10,000 mg/L 1 d (crustaceans, Daphnia magna) OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
ErC_{50}: >100 mg/L 3 d (Algae/water plant, Scenedesmus subspicatus)

Assessment/classification:
Based on available data, the classification criteria are not met.

Additional ecotoxicological information:
Do not allow uncontrolled discharge of product into the environment.

12.2. Persistence and degradability

ethanol CAS No.: 64-17-5 EC No.: 200-578-6
Biodegradation: Yes, rapidly
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7
Biodegradation: Yes, rapidly

Additional information:
The product has not been tested.

12.3. Bioaccumulative potential

dimethyl ether CAS No.: 115-10-6 EC No.: 204-065-8
Log K_{OW}: 0.07

ethanol CAS No.: 64-17-5 EC No.: 200-578-6	
Log K_{OW}: -0.32	
Bioconcentration factor (BCF): 3.2	
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	
Log K_{OW}: 0.05	

Accumulation / Evaluation:
The product has not been tested.

12.4. Mobility in soil
The product has not been tested.

12.5. Results of PBT and vPvB assessment

dimethyl ether CAS No.: 115-10-6 EC No.: 204-065-8
Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
ethanol CAS No.: 64-17-5 EC No.: 200-578-6
Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7
Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
1-methoxypropan-2-ol CAS No.: 107-98-2 EC No.: 203-539-1
Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
ammonia, anhydrous CAS No.: 7664-41-7 EC No.: 231-635-3
Results of PBT and vPvB assessment: —

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties
This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV
Directive 2008/98/EC (Waste Framework Directive)

HP 3	Flammable
HP 4	Irritant — skin irritation and eye damage

Waste code packaging

15 01 04	metallic packaging

Waste treatment options
Appropriate disposal / Product:
Dispose of waste according to applicable legislation.

Appropriate disposal / Package:
Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

13.2. Additional information
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1. UN number or ID number			
UN 1950	UN 1950	UN 1950	UN 1950

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.2. UN proper shipping name			
AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS
14.3. Transport hazard class(es)			
 2.1	 2.1	 2.1	 2.1
14.4. Packing group			
		-	
14.5. Environmental hazards			
No	No	No	No
14.6. Special precautions for user			
Limited quantity (LQ): 1L **Classification code:** 5F **Tunnel restriction code:** (D)	**Limited quantity (LQ):** 1L **Classification code:** 5F	**Limited quantity (LQ):** 1L **EmS-No.:** F-D; S-U	No data available

14.7. Maritime transport in bulk according to IMO instruments

No transport as bulk according to IBC Code.

SECTION 15: Regulatory information

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

15.1.1. EU legislation

Other regulations (EU):

Use restriction according to REACH annex XVII, no.: 3, 28, 40, 75

Aerosol Directive (75/324/EEC)

Maximum VOC content of the product in a ready to use condition: 710 g/L

Directive 2004/42/EC on the limitation of emissions of volatile organic compounds:

Volatile organic compounds (VOC) content in percent by weight: 96 Vol-%

15.1.2. National regulations

[DE] National regulations

Restrictions of occupation

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Störfallverordnung (12. BImschV)

for substances contained in the product:

P3a 'Flammable' aerosols Category 1 or 2, containing flammable gases Category 1 or 2 or flammable liquids

Technische Anleitung zur Reinhaltung der Luft (TA-Luft)

Remark:

To follow: 5.2.5

Water hazard class

WGK:

1 - slightly hazardous to water

Source:

Self-classification (mixture; calculation rule).

Technische Regeln für Gefahrstoffe

TRGS 500
TRGS 510
TRGS 900

Berufsgenossenschaftliche Vorschriften (DGUV-Vorschriften)

Berufsgenossenschaftliche Informationen (DGUV-Informationen) 868

Berufsgenossenschaftliche Regeln (DGUV-Regeln) 189, 190, 192, 195

[SK] National regulations

Other regulations, restrictions and prohibition regulations

Zákon č. 67/2010 Z.z., o podmienkach uvedenia chemických látok a chemických zmesí na trh a o zmene a doplnení niektorých zákonov (chemický zákon).
Zákon č. 124/2006 Z. z. o bezpečnosti a ochrane zdravia pri práci a o zmene a doplnení niektorých zákonov.
Zákon NR SR č. 355/2007 Z.z., o ochrane, podpore a rozvoji verejného zdravia a o zmene a doplnení niektorých zákonov, v znení neskorších predpisov.
Nariadenie vlády SR 471/2011 Z.z., ktorým sa mení nariadenie vlády Slovenskej republiky č. 355/2006 Z. z. o ochrane zamestnancov pred rizikami súvisiacimi s expozíciou chemickým faktorom pri práci, Príloha č.1.
Zákon č. 79/2015 Z.z. o odpadoch v znení neskorších predpisov.
Vyhláška MV SR č. 96/2004 Z.z., ktorou sa ustanovujú zásady protipožiarnej bezpečnosti pri manipulácii a skladovaní horľavých kvapalín, ťažkých vykurovacích olejov a rastlinných a živočíšnych tukov a olejov.
Zákon NR SR č. 137/2010 Z.z. o ovzduší v znení neskorších predpisov.
Zákon č. 319/2013 Z.z. o pôsobnosti orgánov štátnej správy pre sprístupňovanie biocídnych výrobkov na trh a ich používanie a o zmene a doplnení niektorých zákonov (biocídny zákon).

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

16.1. Indication of changes

Not applicable

16.2. Abbreviations and acronyms

AC	Article Category
ACGIH	American Conference of Governmental Industrial Hygienists
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
DIN	German Institute for Standardization / German Industrial Standard
DNEL	derived no-effect level
EC_{50}	Effective Concentration 50%
ES	Exposure scenario
EWC	European Waste Catalogue
IBC	Intermediate Bulk Container
IC_{50}	Inhibition Concentration 50 %
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
KG	body weight
LC_{50}	Lethal (fatal) Concentration 50%
LD_{50}	Lethal (fatal) Dose 50%
MAK	Maximum concentration in the workplace air (CH)
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety & Health
NOEC	No Observed Effect Concentration
OECD	Organisation for Economic Cooperation and Development
OSHA	Occupational Safety & Health Administration
PBT	persistent and bioaccumulative and toxic
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation and Authorization of Chemicals
RID	Dangerous goods regulations for transport by rail
TRGS	Technische Regeln für Gefahrstoffe
UN	United Nations
VOC	Volatile organic compounds

See overview table at www.euphrac.eu

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

16.3. Key literature references and sources for data

EC 1907/2006 - REACH Regulation
1272/2008 EC - Regulation on classification, labeling and packaging of substances and mixtures, and amending Directives 67/548/EEC and 1999/45/EC and Regulation (EC) No 1907/2006
Regulation (EC) No 1907/2006 (REACH), Annex II
European Chemicals Agency (ECHA), C & L classification and labeling inventory
European Chemicals Agency (ECHA), ECHA CHEM Registered substances
OECD The Global Portal to Information on Chemical Substances (ChemPortal)
Institute for Occupational Safety and Health of the German Social Accident Insurance (IFA): GESTIS substance database and International limit values for chemical substances
Federal Environment Agency, Section IV 2.4: Documentation and Information Centre substances hazardous to water Rigoletto (catalog substances hazardous to water)

Substance name	Type	source of supply
dimethyl ether CAS No.: 115-10-6 EC No.: 204-065-8	Classification of the substance or mixture; LC_{50}; EC_{50}; NOEC	Source: European Chemicals Agency, http://echa.europa.eu/
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	EC_{50}	Source: European Chemicals Agency, http://echa.europa.eu/

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Hazard classes and hazard categories	Hazard statements	Classification procedure
aerosol dispensers and lighters *(Aerosol 1)*	H222; H229: Extremely flammable aerosol. Pressurised container: May burst if heated.	On basis of test data.
Serious eye damage/eye irritation *(Eye Irrit. 2)*	H319: Causes serious eye irritation.	Calculation method.
STOT-single exposure *(STOT SE 3)*	H336: May cause drowsiness or dizziness.	Calculation method.

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

Hazard statements	
H220	Extremely flammable gas.
H221	Flammable gas.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H280	Contains gas under pressure; may explode if heated.
H314	Causes severe skin burns and eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.

16.6. Training advice

No data available

16.7. Additional information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.