

# SAFETY DATA SHEET

according to REACH Regulation UK SI 2019/758, as amended, and UK SI 2020/1577

Revision date: 27 May 2022

Print date: 15 Jun 2022

Version: 0.1



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## REDOCOL Gray Haze Remover

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

#### 1.1. Product identifier

Trade name/designation:

REDOCOL Gray Haze Remover

Article No.:

GR100001

UFI:

8JXW-98Y6-P000-A6XR

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

Use of the substance/mixture:

Surface treatment of Wood and other materials

Relevant identified uses:

Sector of uses [SU]

SU 6a: Manufacture of wood and wood products

#### 1.3. Details of the supplier of the safety data sheet

distributor:

Ostermann UK Ltd

Stonebridge Cross Business Park

Unit 104 Pointon Way

WR9 0LW Droitwich

United Kingdom

Telephone: UK +44 (0) 1905 793 550, Ireland +44 (0) 1905 793 552

Telefax: +44 (0) 1905 793 559

E-mail: UK sales.uk@ostermann.eu, Ireland sales.ie@ostermann.eu

Website: www.ostermann.eu

E-mail (competent person): j.bruns@ostermann.eu

#### 1.4. Emergency telephone number

UK: Mr. J. Bruns +44 1905 793 550

IR: Mr. J. Bruns +44 1905 793 552, 24h: +49 30 - 30 68 67 00 (National Poison Inform. Centre Berlin) , UK +44 1905 793 550/ IR +44 (0)1905 793 552 (Only available during office hours.)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

Classification according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567

Hazard classes and hazard categories	Hazard statements	Classification procedure
Aerosols ( <i>Aerosol 1</i> )	H222; H229: Extremely flammable aerosol. Pressurised container: May burst if heated.	
Skin corrosion/irritation ( <i>Skin Irrit. 2</i> )	H315: Causes skin irritation.	
Serious eye damage/eye irritation ( <i>Eye Dam. 1</i> )	H318: Causes serious eye damage.	
STOT-single exposure ( <i>STOT SE 3</i> )	H335: May cause respiratory irritation.	
STOT-single exposure ( <i>STOT SE 3</i> )	H336: May cause drowsiness or dizziness.	

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### 2.2. Label elements

Labelling according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567

Hazard pictograms:



**GHS02**  
Flame



**GHS07**  
Exclamation mark



**GHS05**  
Corrosion

Signal word: Danger

#### Hazard statements for physical hazards

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.

#### Hazard statements for health hazards

H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

#### 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 dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/Personal 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.
P314	Get medical advice/attention if you feel unwell.

#### Precautionary statements Storage

P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
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#### Special rules for supplemental label elements for certain mixtures:

Propane/BUTANE, ethyl acetate, n-Butyl acetate, METHYL ISOBUTYL KETONE, Xylene, Ethylbenzene, 1-methoxypropan-2-ol

### 2.3. Other hazards

No data available

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### Description:

Mixture of following listed substances with nonhazardous additions.

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### Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567	Concentration
<b>CAS No.:</b> 115-10-6 <b>EC No.:</b> 204-065-8 <b>REACH No.:</b> 01-2119472128-37	<b>dimethyl ether</b> Flam. Gas 1A (H220)  <b>Danger</b>	≥ 20 - < 30 Vol-%
<b>CAS No.:</b> 108-10-1 <b>EC No.:</b> 203-550-1 <b>Index No.:</b> 606-004-00-4 <b>REACH No.:</b> 01-2119473980-30	<b>4-methylpentan-2-one</b> Acute Tox. 4 (H332), Carc. 2 (H351), Eye Irrit. 2 (H319), Flam. Liq. 2 (H225), STOT SE 3 (H336)    <b>Danger</b> EUH066 <b>Acute Toxicity Estimate</b> ATE (inhalation, vapour): 11 mg/L	≥ 10 - < 20 Vol-%
<b>CAS No.:</b> 123-86-4 <b>EC No.:</b> 204-658-1 <b>Index No.:</b> 607-025-00-1 <b>REACH No.:</b> 01-2119485493-29-0007	<b>n-butyl acetate</b> Flam. Liq. 3 (H226), STOT SE 3 (H336)   <b>Warning</b> EUH066	≥ 10 - < 20 Vol-%
<b>CAS No.:</b> 141-78-6 <b>EC No.:</b> 205-500-4 <b>Index No.:</b> 607-022-00-5 <b>REACH No.:</b> 01-2119475103-46	<b>ethyl acetate</b> Eye Irrit. 2 (H319), Flam. Liq. 2 (H225), STOT SE 3 (H336)   <b>Danger</b> EUH066	≥ 10 - < 20 Vol-%
<b>CAS No.:</b> 106-97-8 <b>EC No.:</b> 203-448-7 <b>REACH No.:</b> 01-2119474691-32	<b>butane</b> Flam. Gas 1A (H220), Press. Gas (Liq.) (H280)  <b>Danger</b>	≥ 10 - < 15 Vol-%
<b>CAS No.:</b> 74-98-6 <b>EC No.:</b> 200-827-9 <b>REACH No.:</b> 01-2119486944-21-XXXX	<b>propane</b> Flam. Gas 1A (H220), Press. Gas (Liq.) (H280)  <b>Danger</b>	≥ 10 - < 15 Vol-%
<b>CAS No.:</b> 71-36-3 <b>EC No.:</b> 200-751-6 <b>Index No.:</b> 603-004-00-6 <b>REACH No.:</b> 01-2119484630-38	<b>butan-1-ol</b> Acute Tox. 4 (H302), Eye Dam. 1 (H318), Flam. Liq. 3 (H226), STOT SE 3 (H335, H336), Skin Irrit. 2 (H315)    <b>Danger</b>	≥ 3 - < 10 Vol-%
<b>CAS No.:</b> 107-98-2 <b>EC No.:</b> 203-539-1 <b>Index No.:</b> 603-064-00-3 <b>REACH No.:</b> 01-2119457435-35	<b>1-methoxypropan-2-ol</b> Flam. Liq. 3 (H226), STOT SE 3 (H336)   <b>Warning</b>	≥ 1 - < 10 Vol-%
<b>CAS No.:</b> 67-63-0 <b>EC No.:</b> 200-661-7 <b>Index No.:</b> 603-117-00-0 <b>REACH No.:</b> 01-2119457558-25	<b>propan-2-ol</b> Eye Irrit. 2 (H319), Flam. Liq. 2 (H225), STOT SE 3 (H336)   <b>Danger</b>	≥ 1 - < 10 Vol-%
<b>CAS No.:</b> 1330-20-7 <b>EC No.:</b> 215-535-7 <b>Index No.:</b> 601-022-00-9 <b>REACH No.:</b> 01-2119488216-32	<b>xylene</b> Acute Tox. 4 (H332, H312), Flam. Liq. 3 (H226), Skin Irrit. 2 (H315)   <b>Warning</b>	≥ 1 - < 4 Vol-%
<b>CAS No.:</b> 108-88-3 <b>EC No.:</b> 203-625-9 <b>Index No.:</b> 601-021-00-3 <b>REACH No.:</b> 01-2119471310-51	<b>toluene</b> Asp. Tox. 1 (H304), Flam. Liq. 2 (H225), Repr. 2 (H361d***), STOT RE 2 (H373**), STOT SE 3 (H336), Skin Irrit. 2 (H315)    <b>Danger</b>	≥ 1 - < 3 Vol-%

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Product identifiers	Substance name Classification according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567	Concentration
CAS No.: 78-83-1 EC No.: 201-148-0 Index No.: 603-108-00-1 REACH No.: 01-2119484609-23	<b>2-methylpropan-1-ol</b> Eye Dam. 1 (H318), Flam. Liq. 3 (H226), STOT SE 3 (H335, H336), Skin Irrit. 2 (H315)  <b>Danger</b>	≥ 1 - < 3 Vol-%
CAS No.: 100-41-4 EC No.: 202-849-4 Index No.: 601-023-00-4 REACH No.: 01-2119489370-35	<b>ethylbenzene</b> Acute Tox. 4 (H332), Asp. Tox. 1 (H304), Flam. Liq. 2 (H225), STOT RE 2 (H373)  <b>Danger</b>	≥ 1 - < 2 Vol-%

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

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information:

Remove affected person from the danger area and lay down.

#### Following inhalation:

IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Remove casualty to fresh air and keep warm and at rest. In case of respiratory tract irritation, consult a physician.

#### In case of skin contact:

IF ON SKIN: Wash with plenty of water/soap. Do not use solvents or thinners. If skin irritation occurs: Get medical advice/attention.

#### After 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. Remove contact lenses, if present and easy to do. Continue rinsing.

#### Following ingestion:

Do NOT induce vomiting.

#### Self-protection of the first aider:

First aider: Pay attention to self-protection!

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

Headache, Dizziness, Fatigue, muscle weakness, [\P:29e47c8d-abb1-4c92-90f4-22d02f9a1dc8\](#)  
[\P:29e47c8d-abb1-4c92-90f4-22d02f9a1dc8\](#) [\P:0a2d039f-dbf4-42b4-afce-41cb62262c34\](#)

### 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:

Jet of water spray; alcohol resistant foam; carbon dioxide (CO<sub>2</sub>); extinguishing powder.  
Class B fire extinguishers.

#### Unsuitable extinguishing media:

Full water jet.

### 5.2. Special hazards arising from the substance or mixture

As the product contains combustible, organic constituents, in the case of a fire, dense black smoke is formed, containing dangerous combustion products (see section 10). Vapours can form explosive mixtures with air. Do not breathe fume.

### 5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

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### 5.4. Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Cool endangered containers by spraying with water.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

##### Personal precautions:

Keep away from sources of ignition - No smoking. Do not breathe gas/fumes/vapour/spray. Provide adequate ventilation.

##### Protective equipment:

Personal protection equipment: see section 8

#### 6.1.2. For emergency responders

No data available

### 6.2. Environmental precautions

Do not allow to enter into surface water or drains. Shafts and sewers must be protected from entry of the product.

### 6.3. Methods and material for containment and cleaning up

#### For cleaning up:

Clean contaminated articles and floor according to the environmental legislation. Clean with detergents. Avoid solvent cleaners. Collect in closed and suitable containers for disposal.

### 6.4. Reference to other sections

Personal protection equipment: see section 8.

Safe handling: see section 7.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Protective measures

##### Advices on safe handling:

Caution! Container under pressure. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Do not open container by force. Aerosol dispensers and lighters. Do not spray on naked flames or any incandescent material. Avoid the formation of flammable or explosive solvent vapours in the air and exceed the AGW limit values. Provide adequate ventilation. If handled uncovered, arrangements with local exhaust ventilation should be used if possible. Do not breathe mist/vapours/spray. Avoid contact with skin, eyes and clothes.

##### Measures to prevent aerosol and dust generation:

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray.

##### Environmental precautions:

Do not allow to enter into surface water or drains.

##### Advices on general occupational hygiene

Do not eat, drink or smoke when using this product.

### 7.2. Conditions for safe storage, including any incompatibilities

#### Requirements for storage rooms and vessels:

Keep only in the original container in a cool, well-ventilated place.

#### Hints on storage assembly:

Keep away from: Oxidizing agent, acidic alkaline materials

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

#### Further information on storage conditions:

Protect against: Frost, Heat, Protect from sunlight. Keep away from sources of ignition - No smoking.

### 7.3. Specific end use(s)

No data available

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### 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
IE	dimethyl ether CAS No.: 115-10-6 EC No.: 204-065-8	① 1,000 ppm (1,920 mg/m <sup>3</sup> )
IOELV (EU)	dimethyl ether CAS No.: 115-10-6 EC No.: 204-065-8	① 1,000 ppm (1,920 mg/m <sup>3</sup> )
WEL (GB)	dimethyl ether CAS No.: 115-10-6 EC No.: 204-065-8	① 400 ppm (766 mg/m <sup>3</sup> ) ② 500 ppm (958 mg/m <sup>3</sup> )
IE	4-methylpentan-2-one CAS No.: 108-10-1 EC No.: 203-550-1	① 20 ppm (83 mg/m <sup>3</sup> ) ② 50 ppm (208 mg/m <sup>3</sup> ) ⑤ (may be absorbed through the skin)
IOELV (EU)	4-methylpentan-2-one CAS No.: 108-10-1 EC No.: 203-550-1	① 20 ppm (83 mg/m <sup>3</sup> ) ② 50 ppm (208 mg/m <sup>3</sup> )
WEL (GB)	4-methylpentan-2-one CAS No.: 108-10-1 EC No.: 203-550-1	① 50 ppm (208 mg/m <sup>3</sup> ) ② 100 ppm (416 mg/m <sup>3</sup> ) ⑤ (may be absorbed through the skin)
IE	n-butyl acetate CAS No.: 123-86-4 EC No.: 204-658-1	① 50 ppm (241 mg/m <sup>3</sup> ) ② 150 ppm (723 mg/m <sup>3</sup> )
IOELV (EU)	n-butyl acetate CAS No.: 123-86-4 EC No.: 204-658-1	① 50 ppm (241 mg/m <sup>3</sup> ) ② 150 ppm (723 mg/m <sup>3</sup> )
IE	ethyl acetate CAS No.: 141-78-6 EC No.: 205-500-4	① 200 ppm (734 mg/m <sup>3</sup> ) ② 400 ppm (1,468 mg/m <sup>3</sup> )
WEL (GB)	ethyl acetate CAS No.: 141-78-6 EC No.: 205-500-4	① 200 ppm (734 mg/m <sup>3</sup> ) ② 400 ppm (1,468 mg/m <sup>3</sup> )
IOELV (EU)	ethyl acetate CAS No.: 141-78-6 EC No.: 205-500-4	① 200 ppm (734 mg/m <sup>3</sup> ) ② 400 ppm (1,468 mg/m <sup>3</sup> )
IE	butane CAS No.: 106-97-8 EC No.: 203-448-7	① 1,000 ppm
WEL (GB)	butane CAS No.: 106-97-8 EC No.: 203-448-7	① 600 ppm (1,450 mg/m <sup>3</sup> ) ② 750 ppm (1,810 mg/m <sup>3</sup> )
IE	butan-1-ol CAS No.: 71-36-3 EC No.: 200-751-6	① 20 ppm
WEL (GB)	butan-1-ol CAS No.: 71-36-3 EC No.: 200-751-6	② 50 ppm (154 mg/m <sup>3</sup> ) ⑤ (may be absorbed through the skin)
IE	1-methoxypropan-2-ol CAS No.: 107-98-2 EC No.: 203-539-1	① 100 ppm (375 mg/m <sup>3</sup> ) ② 150 ppm (568 mg/m <sup>3</sup> )

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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
IOELV (EU)	1-methoxypropan-2-ol CAS No.: 107-98-2 EC No.: 203-539-1	① 100 ppm (375 mg/m <sup>3</sup> ) ② 150 ppm (568 mg/m <sup>3</sup> ) ⑤ (may be absorbed through the skin)
WEL (GB)	1-methoxypropan-2-ol CAS No.: 107-98-2 EC No.: 203-539-1	① 100 ppm (375 mg/m <sup>3</sup> ) ② 150 ppm (560 mg/m <sup>3</sup> ) ⑤ (may be absorbed through the skin)
IE	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)
WEL (GB)	propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	① 400 ppm (999 mg/m <sup>3</sup> ) ② 500 ppm (1,250 mg/m <sup>3</sup> )
IE	xylene CAS No.: 1330-20-7 EC No.: 215-535-7	① 50 ppm (221 mg/m <sup>3</sup> ) ② 100 ppm (442 mg/m <sup>3</sup> ) ⑤ (may be absorbed through the skin)
IOELV (EU)	xylene CAS No.: 1330-20-7 EC No.: 215-535-7	① 50 ppm (221 mg/m <sup>3</sup> ) ② 100 ppm (442 mg/m <sup>3</sup> ) ⑤ (may be absorbed through the skin)
WEL (GB)	xylene CAS No.: 1330-20-7 EC No.: 215-535-7	① 50 ppm (220 mg/m <sup>3</sup> ) ② 100 ppm (441 mg/m <sup>3</sup> ) ⑤ (may be absorbed through the skin)
IE	toluene CAS No.: 108-88-3 EC No.: 203-625-9	① 50 ppm (192 mg/m <sup>3</sup> ) ② 100 ppm (384 mg/m <sup>3</sup> ) ⑤ (may be absorbed through the skin)
IOELV (EU)	toluene CAS No.: 108-88-3 EC No.: 203-625-9	① 50 ppm (192 mg/m <sup>3</sup> ) ② 100 ppm (384 mg/m <sup>3</sup> ) ⑤ (may be absorbed through the skin)
WEL (GB)	toluene CAS No.: 108-88-3 EC No.: 203-625-9	① 50 ppm (191 mg/m <sup>3</sup> ) ② 100 ppm (384 mg/m <sup>3</sup> ) ⑤ (may be absorbed through the skin)
IE	2-methylpropan-1-ol CAS No.: 78-83-1 EC No.: 201-148-0	① 50 ppm (150 mg/m <sup>3</sup> ) ② 75 ppm (225 mg/m <sup>3</sup> )
WEL (GB)	2-methylpropan-1-ol CAS No.: 78-83-1 EC No.: 201-148-0	① 50 ppm (154 mg/m <sup>3</sup> ) ② 75 ppm (231 mg/m <sup>3</sup> )
IE	ethylbenzene CAS No.: 100-41-4 EC No.: 202-849-4	① 100 ppm (442 mg/m <sup>3</sup> ) ② 200 ppm (884 mg/m <sup>3</sup> ) ⑤ (may be absorbed through the skin)
IOELV (EU)	ethylbenzene CAS No.: 100-41-4 EC No.: 202-849-4	① 100 ppm (442 mg/m <sup>3</sup> ) ② 200 ppm (884 mg/m <sup>3</sup> ) ⑤ (may be absorbed through the skin)
WEL (GB)	ethylbenzene CAS No.: 100-41-4 EC No.: 202-849-4	① 100 ppm (441 mg/m <sup>3</sup> ) ② 125 ppm (552 mg/m <sup>3</sup> ) ⑤ (may be absorbed through the skin)

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### 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
BMGV (GB)	4-methylpentan-2-one CAS No.: 108-10-1 EC No.: 203-550-1	20 µmol/L	① 4-methylpentan - 2-one ② urine ③ end of exposure or end of shift
BMGV (GB)	xylene CAS No.: 1330-20-7 EC No.: 215-535-7	650 mmol/mol creatinine	① methyl hippuric acid ② urine ③ end of exposure or end of shift

### 8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
dimethyl ether CAS No.: 115-10-6 EC No.: 204-065-8	1,894 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, systemic effects
dimethyl ether CAS No.: 115-10-6 EC No.: 204-065-8	471 mg/m <sup>3</sup>	① DNEL Consumer ② Long-term - inhalation, systemic effects
4-methylpentan-2-one CAS No.: 108-10-1 EC No.: 203-550-1	83 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, systemic effects
4-methylpentan-2-one CAS No.: 108-10-1 EC No.: 203-550-1	14.7 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, systemic effects
4-methylpentan-2-one CAS No.: 108-10-1 EC No.: 203-550-1	208 mg/m <sup>3</sup>	① DNEL worker ② Acute - inhalation, systemic effects
4-methylpentan-2-one CAS No.: 108-10-1 EC No.: 203-550-1	11.8 mg/kg	① DNEL worker ② Long-term - dermal, systemic effects
4-methylpentan-2-one CAS No.: 108-10-1 EC No.: 203-550-1	4.2 mg/kg	① DNEL worker ② Long-term - dermal, systemic effects
4-methylpentan-2-one CAS No.: 108-10-1 EC No.: 203-550-1	4.2 mg/m <sup>3</sup>	① DNEL worker ② Long-term - oral, systemic effects
n-butyl acetate CAS No.: 123-86-4 EC No.: 204-658-1	48 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, systemic effects
n-butyl acetate CAS No.: 123-86-4 EC No.: 204-658-1	102.34 mg/m <sup>3</sup>	① DNEL Consumer ② Long-term - inhalation, systemic effects
n-butyl acetate CAS No.: 123-86-4 EC No.: 204-658-1	859.7 mg/m <sup>3</sup>	① DNEL Consumer ② Acute - inhalation, systemic effects
n-butyl acetate CAS No.: 123-86-4 EC No.: 204-658-1	480 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, local effects
n-butyl acetate CAS No.: 123-86-4 EC No.: 204-658-1	600 mg/m <sup>3</sup>	① DNEL worker ② Acute - inhalation, local effects
n-butyl acetate CAS No.: 123-86-4 EC No.: 204-658-1	7 mg/kg bw/ day	① DNEL worker ② Long-term - dermal, systemic effects



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Substance name	DNEL value	① DNEL type ② Exposure route
n-butyl acetate CAS No.: 123-86-4 EC No.: 204-658-1	11 mg/kg bw/ day	① DNEL worker ② Acute - dermal, systemic effects
ethyl acetate CAS No.: 141-78-6 EC No.: 205-500-4	734 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, systemic effects
ethyl acetate CAS No.: 141-78-6 EC No.: 205-500-4	367 mg/m <sup>3</sup>	① DNEL Consumer ② Long-term - inhalation, systemic effects
ethyl acetate CAS No.: 141-78-6 EC No.: 205-500-4	1,468 mg/m <sup>3</sup>	① DNEL worker ② Acute - inhalation, systemic effects
ethyl acetate CAS No.: 141-78-6 EC No.: 205-500-4	734 mg/m <sup>3</sup>	① DNEL Consumer ② Acute - inhalation, systemic effects
ethyl acetate CAS No.: 141-78-6 EC No.: 205-500-4	734 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, local effects
ethyl acetate CAS No.: 141-78-6 EC No.: 205-500-4	367 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, local effects
ethyl acetate CAS No.: 141-78-6 EC No.: 205-500-4	1,468 mg/m <sup>3</sup>	① DNEL worker ② Acute - inhalation, local effects
ethyl acetate CAS No.: 141-78-6 EC No.: 205-500-4	734 mg/m <sup>3</sup>	① DNEL worker ② Acute - inhalation, local effects
ethyl acetate CAS No.: 141-78-6 EC No.: 205-500-4	63 mg/kg bw/ day	① DNEL worker ② Long-term - dermal, systemic effects
ethyl acetate CAS No.: 141-78-6 EC No.: 205-500-4	73 mg/kg bw/ day	① DNEL worker ② Long-term - dermal, systemic effects
ethyl acetate CAS No.: 141-78-6 EC No.: 205-500-4	4.5 mg/kg bw/ day	① DNEL worker ② Long-term - oral, systemic effects
butan-1-ol CAS No.: 71-36-3 EC No.: 200-751-6	55.357 mg/m <sup>3</sup>	① DNEL Consumer ② Long-term - inhalation, systemic effects
butan-1-ol CAS No.: 71-36-3 EC No.: 200-751-6	310 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, local effects
butan-1-ol CAS No.: 71-36-3 EC No.: 200-751-6	155 mg/m <sup>3</sup>	① DNEL Consumer ② Long-term - inhalation, local effects
butan-1-ol CAS No.: 71-36-3 EC No.: 200-751-6	3.125 mg/kg bw/day	① DNEL Consumer ② Long-term - dermal, systemic effects
butan-1-ol CAS No.: 71-36-3 EC No.: 200-751-6	1.562 mg/kg bw/day	① DNEL Consumer ② Long-term - oral, systemic effects
1-methoxypropan-2-ol CAS No.: 107-98-2 EC No.: 203-539-1	369 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, systemic effects
1-methoxypropan-2-ol CAS No.: 107-98-2 EC No.: 203-539-1	43.9 mg/m <sup>3</sup>	① DNEL Consumer ② Long-term - inhalation, systemic effects

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1-methoxypropan-2-ol CAS No.: 107-98-2 EC No.: 203-539-1	553.5 mg/m <sup>3</sup>	① DNEL worker ② Acute - inhalation, systemic effects
1-methoxypropan-2-ol CAS No.: 107-98-2 EC No.: 203-539-1	553.5 mg/m <sup>3</sup>	① DNEL worker ② Acute - inhalation, local effects
1-methoxypropan-2-ol CAS No.: 107-98-2 EC No.: 203-539-1	183 mg/kg bw/ day	① DNEL worker ② Long-term - dermal, systemic effects
1-methoxypropan-2-ol CAS No.: 107-98-2 EC No.: 203-539-1	78 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	33 mg/kg bw/ day	① DNEL Consumer ② Long-term - oral, systemic effects
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	500 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, systemic effects
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	89 mg/m <sup>3</sup>	① DNEL Consumer ② Long-term - inhalation, systemic effects
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	319 mg/kg	① DNEL Consumer ② Long-term - dermal, systemic effects
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	888 mg/kg	① DNEL worker ② Long-term - dermal, local effects
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	26 mg/kg	① DNEL Consumer ② Long-term - oral, systemic effects
toluene CAS No.: 108-88-3 EC No.: 203-625-9	192 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, systemic effects
toluene CAS No.: 108-88-3 EC No.: 203-625-9	56.5 mg/m <sup>3</sup>	① DNEL Consumer ② Long-term - inhalation, systemic effects
toluene CAS No.: 108-88-3 EC No.: 203-625-9	384 mg/m <sup>3</sup>	① DNEL worker ② Acute - inhalation, systemic effects
toluene CAS No.: 108-88-3 EC No.: 203-625-9	226 mg/m <sup>3</sup>	① DNEL Consumer ② Acute - inhalation, systemic effects
toluene CAS No.: 108-88-3 EC No.: 203-625-9	192 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, local effects
toluene CAS No.: 108-88-3 EC No.: 203-625-9	56.5 mg/m <sup>3</sup>	① DNEL Consumer ② Long-term - inhalation, local effects
toluene CAS No.: 108-88-3 EC No.: 203-625-9	384 mg/m <sup>3</sup>	① DNEL worker ② Acute - inhalation, local effects
toluene CAS No.: 108-88-3 EC No.: 203-625-9	226 mg/m <sup>3</sup>	① DNEL Consumer ② Acute - inhalation, local effects
toluene CAS No.: 108-88-3 EC No.: 203-625-9	384 mg/kg bw/ day	① DNEL worker ② Long-term - dermal, systemic effects

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toluene CAS No.: 108-88-3 EC No.: 203-625-9	226 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
toluene CAS No.: 108-88-3 EC No.: 203-625-9	8.13 mg/kg bw/day	① DNEL worker ② Long-term - oral, systemic effects
2-methylpropan-1-ol CAS No.: 78-83-1 EC No.: 201-148-0	310 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, local effects
2-methylpropan-1-ol CAS No.: 78-83-1 EC No.: 201-148-0	55 mg/m <sup>3</sup>	① DNEL Consumer ② Long-term - inhalation, local effects
ethylbenzene CAS No.: 100-41-4 EC No.: 202-849-4	77 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, systemic effects
ethylbenzene CAS No.: 100-41-4 EC No.: 202-849-4	15 mg/m <sup>3</sup>	① DNEL Consumer ② Long-term - inhalation, systemic effects
ethylbenzene CAS No.: 100-41-4 EC No.: 202-849-4	293 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, local effects
ethylbenzene CAS No.: 100-41-4 EC No.: 202-849-4	180 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
ethylbenzene CAS No.: 100-41-4 EC No.: 202-849-4	1.6 mg/kg bw/day	① DNEL Consumer ② Long-term - oral, systemic effects

Substance name	PNEC Value	① PNEC type
dimethyl ether CAS No.: 115-10-6 EC No.: 204-065-8	155 µg/L	① PNEC aquatic, freshwater
dimethyl ether CAS No.: 115-10-6 EC No.: 204-065-8	16 µg/L	① PNEC aquatic, marine water
dimethyl ether CAS No.: 115-10-6 EC No.: 204-065-8	160 mg/L	① PNEC sewage treatment plant
dimethyl ether CAS No.: 115-10-6 EC No.: 204-065-8	0.681 mg/kg	① PNEC sediment, freshwater
dimethyl ether CAS No.: 115-10-6 EC No.: 204-065-8	0.069 mg/kg	① PNEC sediment, marine water
dimethyl ether CAS No.: 115-10-6 EC No.: 204-065-8	0.045 mg/kg	① PNEC soil
dimethyl ether CAS No.: 115-10-6 EC No.: 204-065-8	1.549 mg/L	① PNEC aquatic, intermittent release
4-methylpentan-2-one CAS No.: 108-10-1 EC No.: 203-550-1	600 µg/L	① PNEC aquatic, freshwater
4-methylpentan-2-one CAS No.: 108-10-1 EC No.: 203-550-1	60 µg/L	① PNEC aquatic, marine water
4-methylpentan-2-one CAS No.: 108-10-1 EC No.: 203-550-1	27.5 mg/L	① PNEC sewage treatment plant

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Substance name	PNEC Value	① PNEC type
4-methylpentan-2-one CAS No.: 108-10-1 EC No.: 203-550-1	8.27 mg/kg	① PNEC sediment, freshwater
4-methylpentan-2-one CAS No.: 108-10-1 EC No.: 203-550-1	0.83 mg/kg	① PNEC sediment, marine water
4-methylpentan-2-one CAS No.: 108-10-1 EC No.: 203-550-1	1.3 mg/kg	① PNEC soil
4-methylpentan-2-one CAS No.: 108-10-1 EC No.: 203-550-1	1.5 mg/L	① PNEC aquatic, intermittent release
n-butyl acetate CAS No.: 123-86-4 EC No.: 204-658-1	0.18 mg/L	① PNEC aquatic, freshwater
n-butyl acetate CAS No.: 123-86-4 EC No.: 204-658-1	0.018 mg/L	① PNEC aquatic, marine water
n-butyl acetate CAS No.: 123-86-4 EC No.: 204-658-1	35.6 mg/L	① PNEC sewage treatment plant
n-butyl acetate CAS No.: 123-86-4 EC No.: 204-658-1	0.981 mg/L	① PNEC sediment, freshwater
n-butyl acetate CAS No.: 123-86-4 EC No.: 204-658-1	0.0981 mg/L	① PNEC sediment, marine water
n-butyl acetate CAS No.: 123-86-4 EC No.: 204-658-1	0.36 mg/L	① PNEC aquatic, intermittent release
n-butyl acetate CAS No.: 123-86-4 EC No.: 204-658-1	0.0903 mg/L	① PNEC soil, freshwater
ethyl acetate CAS No.: 141-78-6 EC No.: 205-500-4	240 µg/L	① PNEC aquatic, freshwater
ethyl acetate CAS No.: 141-78-6 EC No.: 205-500-4	24 µg/L	① PNEC aquatic, marine water
ethyl acetate CAS No.: 141-78-6 EC No.: 205-500-4	6,520 mg/L	① PNEC sewage treatment plant
ethyl acetate CAS No.: 141-78-6 EC No.: 205-500-4	1.15 mg/kg	① PNEC sediment, freshwater
ethyl acetate CAS No.: 141-78-6 EC No.: 205-500-4	0.115 mg/kg	① PNEC sediment, marine water
ethyl acetate CAS No.: 141-78-6 EC No.: 205-500-4	0.148 mg/kg	① PNEC soil
ethyl acetate CAS No.: 141-78-6 EC No.: 205-500-4	200 mg/kg	① PNEC secondary poisoning
ethyl acetate CAS No.: 141-78-6 EC No.: 205-500-4	1.65 mg/L	① PNEC aquatic, intermittent release
butan-1-ol CAS No.: 71-36-3 EC No.: 200-751-6	82 µg/L	① PNEC aquatic, freshwater

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butan-1-ol CAS No.: 71-36-3 EC No.: 200-751-6	8.2 µg/L	① PNEC aquatic, marine water
butan-1-ol CAS No.: 71-36-3 EC No.: 200-751-6	0.0324 mg/kg	① PNEC aquatic, marine water
butan-1-ol CAS No.: 71-36-3 EC No.: 200-751-6	2.476 mg/L	① PNEC sewage treatment plant
butan-1-ol CAS No.: 71-36-3 EC No.: 200-751-6	0.324 mg/kg	① PNEC sediment, freshwater
butan-1-ol CAS No.: 71-36-3 EC No.: 200-751-6	0.0166 mg/kg	① PNEC soil
butan-1-ol CAS No.: 71-36-3 EC No.: 200-751-6	2.25 mg/L	① PNEC aquatic, intermittent release
1-methoxypropan-2-ol CAS No.: 107-98-2 EC No.: 203-539-1	10 mg/L	① PNEC aquatic, freshwater
1-methoxypropan-2-ol CAS No.: 107-98-2 EC No.: 203-539-1	1 mg/L	① PNEC aquatic, marine water
1-methoxypropan-2-ol CAS No.: 107-98-2 EC No.: 203-539-1	100 mg/L	① PNEC sewage treatment plant
1-methoxypropan-2-ol CAS No.: 107-98-2 EC No.: 203-539-1	52.3 mg/kg	① PNEC sediment, freshwater
1-methoxypropan-2-ol CAS No.: 107-98-2 EC No.: 203-539-1	5.2 mg/kg	① PNEC sediment, marine water
1-methoxypropan-2-ol CAS No.: 107-98-2 EC No.: 203-539-1	4.59 mg/kg	① PNEC soil
1-methoxypropan-2-ol CAS No.: 107-98-2 EC No.: 203-539-1	100 mg/L	① PNEC aquatic, intermittent release
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	140.9 mg/L	① PNEC aquatic, freshwater
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	140.9 mg/L	① PNEC aquatic, marine water
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	2,251 mg/L	① PNEC sewage treatment plant
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	552 mg/kg	① PNEC sediment, freshwater
propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7	28 mg/kg	① PNEC soil, freshwater
toluene CAS No.: 108-88-3 EC No.: 203-625-9	74 µg/L	① PNEC aquatic, freshwater
toluene CAS No.: 108-88-3 EC No.: 203-625-9	7.4 µg/L	① PNEC aquatic, marine water

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Substance name	PNEC Value	① PNEC type
toluene CAS No.: 108-88-3 EC No.: 203-625-9	840 µg/L	① PNEC sewage treatment plant
toluene CAS No.: 108-88-3 EC No.: 203-625-9	1.78 mg/kg	① PNEC sediment, freshwater
toluene CAS No.: 108-88-3 EC No.: 203-625-9	0.178 mg/kg	① PNEC sediment, marine water
toluene CAS No.: 108-88-3 EC No.: 203-625-9	0.313 mg/kg	① PNEC soil
toluene CAS No.: 108-88-3 EC No.: 203-625-9	37.8 µg/L	① PNEC aquatic, intermittent release
2-methylpropan-1-ol CAS No.: 78-83-1 EC No.: 201-148-0	400 µg/L	① PNEC aquatic, freshwater
2-methylpropan-1-ol CAS No.: 78-83-1 EC No.: 201-148-0	40 µg/L	① PNEC aquatic, marine water
2-methylpropan-1-ol CAS No.: 78-83-1 EC No.: 201-148-0	10 mg/L	① PNEC sewage treatment plant
2-methylpropan-1-ol CAS No.: 78-83-1 EC No.: 201-148-0	1.56 mg/kg bw/day	① PNEC sediment, freshwater
2-methylpropan-1-ol CAS No.: 78-83-1 EC No.: 201-148-0	156 mg/kg bw/ day	① PNEC sediment, marine water
2-methylpropan-1-ol CAS No.: 78-83-1 EC No.: 201-148-0	11 mg/L	① PNEC aquatic, intermittent release
ethylbenzene CAS No.: 100-41-4 EC No.: 202-849-4	100 µg/L	① PNEC aquatic, freshwater
ethylbenzene CAS No.: 100-41-4 EC No.: 202-849-4	100 µg/L	① PNEC aquatic, marine water
ethylbenzene CAS No.: 100-41-4 EC No.: 202-849-4	9.6 mg/L	① PNEC sewage treatment plant
ethylbenzene CAS No.: 100-41-4 EC No.: 202-849-4	13.7 mg/kg	① PNEC sediment, freshwater
ethylbenzene CAS No.: 100-41-4 EC No.: 202-849-4	13.7 mg/kg	① PNEC sediment, marine water

## 8.2. Exposure controls

### 8.2.1. Appropriate engineering controls

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

### 8.2.2. Personal protection equipment

#### Eye/face protection:

Eye glasses with side protection EN 166.

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### Skin protection:

Wear protective gloves. EN ISO 374. Suitable material: NBR (Nitrile rubber),

**P:c8b69302-ebd9-44f0-8a3b-9ff73c23f00b**, FKM (fluoro rubber), Butyl caoutchouc (butyl rubber).

Protective gloves should be replaced at first signs of wear.

The exact break through time has to be requested from the protective glove manufacturer and must be observed.

### Respiratory protection:

IF exposed: Wear breathing apparatus if exposed to vapours/dusts/aerosols. Filter type: Combination filtering device A2 P2.

### Thermal hazards:

Risk of explosion if heated under confinement.

### 8.2.3. Environmental exposure controls

No data available

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### Appearance

**Physical state:** Aerosol

**Colour:** clear

**Odour:** characteristic

#### Safety relevant basis data

Parameter	Value	at °C	① Method ② Remark
pH	<i>not determined</i>		
Melting point	<i>not determined</i>		
Freezing point	<i>not determined</i>		
Initial boiling point and boiling range	-42.1 - 200 °C		② MSDS Distributor
Decomposition temperature	<i>not determined</i>		
Flash point	-84 °C		② MSDS Distributor
Evaporation rate	<i>not determined</i>		
Auto-ignition temperature	<i>not determined</i>		
Upper/lower flammability or explosive limits	<i>not determined</i>		
Vapour pressure	<i>not determined</i>		
Vapour density	<i>not determined</i>		
Density	0.8 g/cm <sup>3</sup>	20 °C	② MSDS Distributor
Relative density	<i>not determined</i>		
Bulk density	<i>not determined</i>		
Water solubility	<i>not determined</i>		
Partition coefficient: n-octanol/water	<i>not determined</i>		
Dynamic viscosity	<i>not determined</i>		
Kinematic viscosity	<i>not determined</i>		

### 9.2. Other information

No data available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No significant risk to health

### 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

### 10.3. Possibility of hazardous reactions

Heating causes rise in pressure with risk of bursting.

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### 10.4. Conditions to avoid

Pressurised container: May burst if heated.

### 10.5. Incompatible materials

Exothermic reaction with: Keep away from: Oxidising agent, strong, strong base Strong alkali.

### 10.6. Hazardous decomposition products

Carbon dioxide, Carbon monoxide, Nitrogen oxides (NOx), Burning produces heavy smoke.

## SECTION 11: Toxicological information

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

<b>4-methylpentan-2-one</b> CAS No.: 108-10-1 EC No.: 203-550-1
<b>ATE (inhalation, vapour)<sup>2</sup>:</b> 11 mg/L
<b>LD<sub>50</sub> oral:</b> >2,000 - ≤5,000 mg/kg (Rat) MSDS Distributor
<b>LD<sub>50</sub> dermal:</b> >5,000 mg/kg (Rabbit) MSDS Distributor
<b>LC<sub>50</sub> Acute inhalation toxicity (vapour):</b> >10 - ≤20 mg/L 4 h (Rat)
<b>n-butyl acetate</b> CAS No.: 123-86-4 EC No.: 204-658-1
<b>LD<sub>50</sub> oral:</b> 10,760 mg/kg (Ratte) OECD Prüfrichtlinie 423
<b>LD<sub>50</sub> dermal:</b> >14,112 mg/kg (Rabbit) OECD Prüfrichtlinie 402
<b>LC<sub>50</sub> Acute inhalation toxicity (dust/mist):</b> 23.4 mg/L 4 h (Rat) OECD Prüfrichtlinie 403
<b>ethyl acetate</b> CAS No.: 141-78-6 EC No.: 205-500-4
<b>LD<sub>50</sub> oral:</b> 5,620 mg/kg (Rat)
<b>LD<sub>50</sub> dermal:</b> >20,000 mg/kg (Rabbit)
<b>xylene</b> CAS No.: 1330-20-7 EC No.: 215-535-7
<b>LD<sub>50</sub> oral:</b> 4,300 mg/kg (Rat) AMA Archives of Industrial Health. Vol. 14, Pg. 387, 1956.
<b>LD<sub>50</sub> dermal:</b> >1,700 mg/kg (Rabbit) Raw Material Data Handbook, Vol.1: Organic Solvents, 1974. Vol. 1, Pg. 123, 1974.
<b>LC<sub>50</sub> Acute inhalation toxicity (dust/mist):</b> 21.7 mg/L 4 h (Rat) Raw Material Data Handbook, Vol.1: Organic Solvents, 1974. Vol. 1, Pg. 123, 1974.
<b>butan-1-ol</b> CAS No.: 71-36-3 EC No.: 200-751-6
<b>LD<sub>50</sub> oral:</b> 790 mg/kg (Rat) South African Medical Journal. Vol. 43, Pg. 795, 1969.
<b>LD<sub>50</sub> dermal:</b> 3,400 mg/kg (Rabbit) Raw Material Data Handbook, Vol.1: Organic Solvents, 1974. Vol. 1, Pg. 10, 1974.
<b>LC<sub>50</sub> Acute inhalation toxicity (vapour):</b> 24.3 mg/L 4 h (Rat) Raw Material Data Handbook, Vol.1: Organic Solvents, 1974. Vol. 1, Pg. 10, 1974.
<b>1-methoxypropan-2-ol</b> CAS No.: 107-98-2 EC No.: 203-539-1
<b>LD<sub>50</sub> oral:</b> 3,739 - 4,277 mg/kg (Rat)
<b>LD<sub>50</sub> dermal:</b> 2,000 mg/kg (Rat)
<b>toluene</b> CAS No.: 108-88-3 EC No.: 203-625-9
<b>LD<sub>50</sub> oral:</b> 5,580 mg/kg (Rat)
<b>LD<sub>50</sub> dermal:</b> 5,000 mg/kg (Rabbit)
<b>LC<sub>50</sub> Acute inhalation toxicity (vapour):</b> 25.7 - 30 mg/L (Rat)
<b>2-methylpropan-1-ol</b> CAS No.: 78-83-1 EC No.: 201-148-0
<b>LD<sub>50</sub> oral:</b> 2,830 - 3,350 mg/kg (Ratte) AMA Archives of Industrial Hygiene and Occupational Medicine. Vol. 10, Pg. 61, 1954
<b>LD<sub>50</sub> dermal:</b> 2,000 mg/kg (Kaninchen) Raw Material Data Handbook, Vol.1: Organic Solvents, 1974. Vol. 1, Pg. 11, 1974
<b>LC<sub>50</sub> Acute inhalation toxicity (vapour):</b> 18.18 mg/L (Rat)
<b>ethylbenzene</b> CAS No.: 100-41-4 EC No.: 202-849-4
<b>LD<sub>50</sub> oral:</b> 3,500 mg/kg (Rat)
<b>LD<sub>50</sub> dermal:</b> 17.8 mg/kg (Rabbit)
<b>LC<sub>50</sub> Acute inhalation toxicity (dust/mist):</b> 3,500 mg/L (Rat)



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**propan-2-ol** CAS No.: 67-63-0 EC No.: 200-661-7

LD<sub>50</sub> oral: 5,050 mg/kg (Rat)

LD<sub>50</sub> dermal: 12,800 mg/m<sup>3</sup> (Rabbit)

LC<sub>50</sub> Acute inhalation toxicity (gas): >25,000 mg/kg 6 h (Rat)

**dimethyl ether** CAS No.: 115-10-6 EC No.: 204-065-8

LC<sub>50</sub> Acute inhalation toxicity (gas): 164,000 ppmV 4 h (Rat)

**butane** CAS No.: 106-97-8 EC No.: 203-448-7

LC<sub>50</sub> Acute inhalation toxicity (gas): 658 ppmV 4 h (Rat) GESTIS

**propane** CAS No.: 74-98-6 EC No.: 200-827-9

LC<sub>50</sub> Acute inhalation toxicity (gas): 520,400 - 539,600 ppmV 2 h (Mouse) ECHA

<sup>1</sup>: Acute Toxicity Estimate. Harmonised (legal) classification.

### Acute oral toxicity:

aromatic hydrocarbons

### Acute inhalation toxicity:

aromatic hydrocarbons

### Skin corrosion/irritation:

aromatic hydrocarbons

### Serious eye damage/irritation:

aromatic hydrocarbons

## 11.2. Information on other hazards

No data available

## SECTION 12: Ecological information

### 12.1. Toxicity

**4-methylpentan-2-one** CAS No.: 108-10-1 EC No.: 203-550-1

LC<sub>50</sub>: >100 mg/L (fish) MSDS Distributor

LC<sub>50</sub>: >100 mg/L (crustaceans) MSDS Distributor

LC<sub>50</sub>: ≤100 mg/L (Algae/water plant) MSDS Distributor

EC<sub>50</sub>: >100 mg/L (fish) MSDS Distributor

EC<sub>50</sub>: >100 mg/L (crustaceans) MSDS Distributor

EC<sub>50</sub>: ≤100 mg/L (Algae/water plant) MSDS Distributor

IC<sub>50</sub>: >100 mg/L (fish) MSDS Distributor

IC<sub>50</sub>: >100 mg/L (crustaceans) MSDS Distributor

IC<sub>50</sub>: ≤100 mg/L (Algae/water plant) MSDS Distributor

**n-butyl acetate** CAS No.: 123-86-4 EC No.: 204-658-1

LC<sub>50</sub>: 18 mg/L 4 d (fish, Pimephales promelas) OECD Prüfrichtlinie 203

EC<sub>50</sub>: 32 - 44 mg/L 2 d (crustaceans, Daphnia magna)

EC<sub>50</sub>: 246 - 647.7 mg/L 3 d (Algae/water plant, Desmodesmus subspicatus) Wachstumshemmung

NOEC: 105 - 196 mg/L 3 d (Algae/water plant, Desmodesmus subspicatus) Wachstumshemmung

NOEC: 23.2 mg/L 21 d (crustaceans)

IC<sub>50</sub>: 356 mg/L 2 d (Tetrahymena)

**ethyl acetate** CAS No.: 141-78-6 EC No.: 205-500-4

LC<sub>50</sub>: 212 - 484 mg/L 4 d (fish)

LC<sub>50</sub>: 154 - 1,600 mg/L 2 d (crustaceans)

EC<sub>50</sub>: 2,500 - 2,500 mg/L 4 d (Algae/water plant)

**xylene** CAS No.: 1330-20-7 EC No.: 215-535-7

LC<sub>50</sub>: 3.3 - 780 mg/L 4 d (fish) Bailey, H.C., D.H.W. Liu, and H.A. Javitz 1985. Time/Toxicity Relationships in Short-Term Static, Dynamic, and Plug-Flow Bioassays. In: R.C.Bahner and D.J.Hansen (Eds.), Aquatic Toxicology and Hazard Assessment, 8th Symposium, ASTM STP 891, Philadelphia, PA :193-212

LC<sub>50</sub>: 8.5 - 8.5 mg/L 2 d (crustaceans)

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### butan-1-ol CAS No.: 71-36-3 EC No.: 200-751-6

LC<sub>50</sub>: 100 - 2,300 mg/L 4 d (fish) Mattson, V.R., J.W. Arthur, and C.T. Walbridge 1976. Acute Toxicity of Selected Organic Compounds to Fathead Minnows. EPA-600/3-76-097, U.S.EPA, Duluth, MN :12 p.

LC<sub>50</sub>: 1,980 - 1,980 mg/L 2 d (crustaceans) Kuhn, R., M. Pattard, K.D. Pernak, and A. Winter 1989. Results of the Harmful Effects of Selected Water Pollutants (Anilines, Phenols, Aliphatic Compounds) to Daphnia magna. Water Res. 23(4):495-499

### 1-methoxypropan-2-ol CAS No.: 107-98-2 EC No.: 203-539-1

LC<sub>50</sub>: 1,000 - 20,800 mg/L 4 d (fish) ECHA

LC<sub>50</sub>: 21,100 - 25,900 mg/L 2 d (crustaceans) ECHA

EC<sub>50</sub>: 1,000 mg/L (Algae/water plant) ECHA

NOEC: 1,000 - 4,640 mg/L 4 d (fish) ECHA

### toluene CAS No.: 108-88-3 EC No.: 203-625-9

LC<sub>50</sub>: 5.5 mg/L 4 d (fish)

LC<sub>50</sub>: 3.78 mg/L 3 d (crustaceans)

EC<sub>50</sub>: 134 - 207 mg/L 3 d (Algae/water plant)

### 2-methylpropan-1-ol CAS No.: 78-83-1 EC No.: 201-148-0

LC<sub>50</sub>: 1,430 mg/L 4 d (fish) Bottger, A. 1988. Belastung der Anwohner von Chemisch-Reinigungsanlagen durch Tetrachlorethylen. Vortrag :30 (OECDG Data File)

LC<sub>50</sub>: 1,100 mg/L 2 d (crustaceans) Thurston, R.V., T.A. Gilfoil, E.L. Meyn, R.K. Zajdel, T.L. Aoki, and G.D. Veith 1985. Comparative Toxicity of Ten Organic Chemicals to Ten Common Aquatic Species. Water Res. 19(9):1145-1155

EC<sub>50</sub>: 593 - 1,799 mg/L 3 d (Algae/water plant)

NOEC: 20 mg/L 21 d (crustaceans)

NOEC: 53 mg/L 3 d (Algae/water plant)

### ethylbenzene CAS No.: 100-41-4 EC No.: 202-849-4

LC<sub>50</sub>: 4.2 - 5.1 mg/L 4 d (fish)

NOEC: 3.3 mg/L 4 d (fish)

LC<sub>50</sub>: 2.6 mg/L 4 d (crustaceans)

EC<sub>50</sub>: 1.8 - 2.4 mg/L 2 d (crustaceans)

NOEC: 0.96 mg/L 4 d (crustaceans)

EC<sub>50</sub>: 3.6 - 7.7 mg/L 4 d (Algae/water plant)

NOEC: 3.4 - 4.5 mg/L 4 d (Algae/water plant)

### propan-2-ol CAS No.: 67-63-0 EC No.: 200-661-7

LC<sub>50</sub>: 9,640 mg/L 4 d (fish, Pimephales promelas (fathead minnow))

LC<sub>50</sub>: 9,714 mg/L 2 d (crustaceans, Daphnia magna (Big water flea))

NOEC: 250 mg/L 4 d (Algae/water plant, Tetrahymena thermophila)

NOEC: 754 mg/L 2 d (Algae/water plant)

### dimethyl ether CAS No.: 115-10-6 EC No.: 204-065-8

LC<sub>50</sub>: 4,100 mg/L 4 d (fish)

EC<sub>50</sub>: 4,400 mg/L 2 d (crustaceans)

EC<sub>50</sub>: 154.917 mg/L 4 d (Algae/water plant)

NOEC: 4,100 mg/L 4 d (fish)

NOEC: 4,400 mg/L 2 d (crustaceans)

### butane CAS No.: 106-97-8 EC No.: 203-448-7

LC<sub>50</sub>: 49.9 mg/L 4 d (fish, fish) ECHA

LC<sub>50</sub>: 69.43 mg/L 2 d (crustaceans, Daphnia magna (Big water flea)) ECHA

EC<sub>50</sub>: 19.37 mg/L 4 d (Algae/water plant)

### propane CAS No.: 74-98-6 EC No.: 200-827-9

LC<sub>50</sub>: 24.11 - 147.54 mg/L 4 d (fish, other Fish)

LC<sub>50</sub>: 7.71 mg/L 4 d (Algae/water plant, Grünalgen)

LC<sub>50</sub>: 14.22 - 69.43 mg/L 2 d (crustaceans, Daphnia magna (Big water flea))

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### 12.2. Persistence and degradability

<b>4-methylpentan-2-one</b> CAS No.: 108-10-1 EC No.: 203-550-1
Biodegradation: Yes, rapidly
<b>n-butyl acetate</b> CAS No.: 123-86-4 EC No.: 204-658-1
Biodegradation: Yes, rapidly
Remark: 83 % (aerob; Expositionsdauer: 28 d)(OECD Prüfrichtlinie 301D)
<b>ethyl acetate</b> CAS No.: 141-78-6 EC No.: 205-500-4
Biodegradation: Yes, rapidly
<b>butan-1-ol</b> CAS No.: 71-36-3 EC No.: 200-751-6
Biodegradation: Yes, rapidly
<b>1-methoxypropan-2-ol</b> CAS No.: 107-98-2 EC No.: 203-539-1
Biodegradation: Yes, rapidly
<b>toluene</b> CAS No.: 108-88-3 EC No.: 203-625-9
Biodegradation: Yes, rapidly
<b>ethylbenzene</b> CAS No.: 100-41-4 EC No.: 202-849-4
Biodegradation: Yes, slowly
<b>propan-2-ol</b> CAS No.: 67-63-0 EC No.: 200-661-7
Biodegradation: Yes, rapidly
Remark: Empfohlener Wert der LOG KOW Datenbank
<b>dimethyl ether</b> CAS No.: 115-10-6 EC No.: 204-065-8
Biodegradation: Yes, slowly
<b>propane</b> CAS No.: 74-98-6 EC No.: 200-827-9
Biodegradation: Yes, rapidly

### 12.3. Bioaccumulative potential

<b>4-methylpentan-2-one</b> CAS No.: 108-10-1 EC No.: 203-550-1
Log K <sub>OW</sub> : 1.31
<b>n-butyl acetate</b> CAS No.: 123-86-4 EC No.: 204-658-1
Log K <sub>OW</sub> : 2.3
<b>ethyl acetate</b> CAS No.: 141-78-6 EC No.: 205-500-4
Log K <sub>OW</sub> : 0.73
<b>butan-1-ol</b> CAS No.: 71-36-3 EC No.: 200-751-6
Log K <sub>OW</sub> : 1
<b>1-methoxypropan-2-ol</b> CAS No.: 107-98-2 EC No.: 203-539-1
Log K <sub>OW</sub> : 1
<b>toluene</b> CAS No.: 108-88-3 EC No.: 203-625-9
Log K <sub>OW</sub> : 2.73
<b>2-methylpropan-1-ol</b> CAS No.: 78-83-1 EC No.: 201-148-0
Log K <sub>OW</sub> : 0.76
<b>ethylbenzene</b> CAS No.: 100-41-4 EC No.: 202-849-4
Log K <sub>OW</sub> : 3.15
<b>propan-2-ol</b> CAS No.: 67-63-0 EC No.: 200-661-7
Log K <sub>OW</sub> : 0.05
<b>dimethyl ether</b> CAS No.: 115-10-6 EC No.: 204-065-8
Log K <sub>OW</sub> : 0.07
<b>butane</b> CAS No.: 106-97-8 EC No.: 203-448-7
Log K <sub>OW</sub> : 2.89
<b>propane</b> CAS No.: 74-98-6 EC No.: 200-827-9
Log K <sub>OW</sub> : 2.36

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### 12.4. Mobility in soil

No data available

### 12.5. Results of PBT and vPvB assessment

<b>4-methylpentan-2-one</b> CAS No.: 108-10-1 EC No.: 203-550-1
Results of PBT and vPvB assessment: —
<b>n-butyl acetate</b> CAS No.: 123-86-4 EC No.: 204-658-1
Results of PBT and vPvB assessment: —
<b>ethyl acetate</b> CAS No.: 141-78-6 EC No.: 205-500-4
Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
<b>xylene</b> CAS No.: 1330-20-7 EC No.: 215-535-7
Results of PBT and vPvB assessment: —
<b>butan-1-ol</b> CAS No.: 71-36-3 EC No.: 200-751-6
Results of PBT and vPvB assessment: —
<b>1-methoxypropan-2-ol</b> CAS No.: 107-98-2 EC No.: 203-539-1
Results of PBT and vPvB assessment: —
<b>toluene</b> CAS No.: 108-88-3 EC No.: 203-625-9
Results of PBT and vPvB assessment: —
<b>2-methylpropan-1-ol</b> CAS No.: 78-83-1 EC No.: 201-148-0
Results of PBT and vPvB assessment: —
<b>ethylbenzene</b> CAS No.: 100-41-4 EC No.: 202-849-4
Results of PBT and vPvB assessment: —
<b>propan-2-ol</b> 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.
<b>dimethyl ether</b> CAS No.: 115-10-6 EC No.: 204-065-8
Results of PBT and vPvB assessment: —
<b>butane</b> CAS No.: 106-97-8 EC No.: 203-448-7
Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
<b>propane</b> CAS No.: 74-98-6 EC No.: 200-827-9
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

No data available

### 12.7. Other adverse effects

No data available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### 13.1.1. Product/Packaging disposal

#### Waste codes/waste designations according to EWC/AVV

##### Waste code product

14 06 03 \* other solvents and solvent mixtures

\*: Evidence for disposal must be provided.

##### Directive 2008/98/EC (Waste Framework Directive)

HP 3 Flammable

##### Waste code packaging

15 01 10 \* packaging containing residues of or contaminated by dangerous substances

\*: Evidence for disposal must be provided.

#### Remark:

Non-contaminated packages may be recycled.

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### Waste treatment options





#### Appropriate disposal / Product:

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

#### Other disposal recommendations:

Return to Distributor.

## SECTION 14: Transport information

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
<b>14.1. UN number or ID number</b>			
UN 1950	UN 1950	UN 1950	UN 1950
<b>14.2. UN proper shipping name</b>			
AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS
<b>14.3. Transport hazard class(es)</b>			
 2.1	 2.1	 2.1	 2.1
<b>14.4. Packing group</b>			
II	II	II	II
<b>14.5. Environmental hazards</b>			
No	No	No	No
<b>14.6. Special precautions for user</b>			
<b>Special provisions:</b> 190, 327, 344, 625 <b>Limited quantity (LQ):</b> 1 L <b>Hazard identification number (Kemler No.):</b> 23 <b>Classification code:</b> 5F <b>Tunnel restriction code:</b> (D)	<b>Special provisions:</b> 190, 327, 344, 625 <b>Limited quantity (LQ):</b> 1 L <b>Classification code:</b> 5F	<b>Special provisions:</b> 190, 327, 344, 625 <b>Limited quantity (LQ):</b> 1 L <b>EmS-No.:</b> F-G	<b>Special provisions:</b> 190, 327, 344, 625 <b>Limited quantity (LQ):</b> 1 L

### 14.7. Maritime transport in bulk according to IMO instruments

No data available

## SECTION 15: Regulatory information

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

#### 15.1.1. EU legislation

##### Restrictions on use:

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). 4 MuSchRiV. 5 MuSchRiV.

##### Other regulations (EU):

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive], Hazard categories:

- P3b 'Flammable' aerosols Category 1 or 2, not containing flammable gases Category 1 or 2 nor flammable liquids Category 1

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

Volatile organic compounds (VOC) content in percent by weight: 92.13 Vol-%

#### 15.1.2. National regulations

No data available

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### 15.2. Chemical Safety Assessment

No data available

## SECTION 16: Other information

### 16.1. Indication of changes

No data available

### 16.2. Abbreviations and acronyms

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

No data available

### 16.4. Classification for mixtures and used evaluation method according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567

Hazard classes and hazard categories	Hazard statements	Classification procedure
Aerosols ( <i>Aerosol 1</i> )	H222; H229: Extremely flammable aerosol. Pressurised container: May burst if heated.	
Skin corrosion/irritation ( <i>Skin Irrit. 2</i> )	H315: Causes skin irritation.	
Serious eye damage/eye irritation ( <i>Eye Dam. 1</i> )	H318: Causes serious eye damage.	
STOT-single exposure ( <i>STOT SE 3</i> )	H335: May cause respiratory irritation.	
STOT-single exposure ( <i>STOT SE 3</i> )	H336: May cause drowsiness or dizziness.	

### 16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H220	Extremely flammable gas.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H280	Contains gas under pressure; may explode if heated.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

Supplemental hazard information	
EUH066	Repeated exposure may cause skin dryness or cracking.

### 16.6. Training advice

No data available

### 16.7. Additional information

No data available