



Trade name: Marabu Klarlack, 150 ml

Version: 5 / GB

Date revised: 21.04.2023

Substance number: 23111006857

Replaces Version: 4 / GB

Print date: 22.04.23

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

### **1.1. Product identifier**

Marabu Klarlack, 150 ml

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

#### **Use of the substance/preparation**

Spray varnish

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

#### **Address/Manufacturer**

Marabu GmbH & Co. KG  
Asperger Strasse 4  
71732 Tamm  
Germany  
Telephone no. +49-7141/691-0  
Information provided by / telephone Department product safety  
E-mail address of person responsible PRSI@marabu.com  
for this SDS

### **1.4. Emergency telephone number**

(+49) (0)621-60-43333

## **SECTION 2: Hazards identification \*\*\***

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

#### **Classification (Regulation (EC) No. 1272/2008)**

Classification (Regulation (EC) No. 1272/2008)

Aerosol 1	H222
	H229
Eye Irrit. 2	H319
STOT SE 3	H336

### **2.2. Label elements**

#### **Labelling according to regulation (EC) No 1272/2008**

#### **Hazard pictograms**



#### **Signal word**

Danger

#### **Hazard statements \*\*\***

H222	Extremely flammable aerosol.
H229	Pressurized container: may burst if heated.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

#### **Precautionary statements**



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P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
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.
P264.1	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405	Store locked up.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501.9	Dispose of contents/container as problematic waste.

**Hazardous component(s) to be indicated on label (Regulation (EC) No. 1272/2008)**

contains Ethyl acetate; n-Butyl acetate; Propan-2-ol; 2-Methoxy-1-methylethyl acetate

**Supplemental information**

EUH066 Repeated exposure may cause skin dryness or cracking.

**Further supplemental information**

Without adequate ventilation, explosive atmosphere/gas mix may be created.

**2.3. Other hazards**

Pressurized container. At temperatures above 50 °C, deformation and explosion possible, resulting in serious physical injury. Vapours are heavier than air and may therefore form flammable and explosive mixtures with air, even at temperatures below 0 °C. Use in inadequately ventilated areas. Environments may cause breathing problems, drowsiness and, in severe cases, unconsciousness.

The product contains no PBT substances. The product contains no vPvB substances. This product does not contain a substance that has endocrine disrupting properties with respect to human. The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms.

**SECTION 3: Composition/information on ingredients \*\*\*****3.2. Mixtures****Hazardous ingredients \*\*\*****Ethyl acetate**

CAS No.	141-78-6
EINECS no.	205-500-4
Registration no.	01-2119475103-46
Concentration	>= 20 < 25 %
Classification (Regulation (EC) No. 1272/2008)	
	Flam. Liq. 2 H225
	Eye Irrit. 2 H319
	STOT SE 3 H336

**Propan-2-ol**

CAS No.	67-63-0
EINECS no.	200-661-7
Registration no.	01-2119457558-25
Concentration	>= 20 < 25 %
Classification (Regulation (EC) No. 1272/2008)	
	Flam. Liq. 2 H225
	Eye Irrit. 2 H319
	STOT SE 3 H336



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**n-Butyl acetate**

CAS No. 123-86-4  
 EINECS no. 204-658-1  
 Registration no. 01-2119485493-29  
 Concentration >= 1 < 10 %  
 Classification (Regulation (EC) No. 1272/2008)  
 Flam. Liq. 3 H226  
 STOT SE 3 H336

**2-Methoxy-1-methylethyl acetate**

CAS No. 108-65-6  
 EINECS no. 203-603-9  
 Registration no. 01-2119475791-29  
 Concentration >= 1 < 10 %  
 Classification (Regulation (EC) No. 1272/2008)  
 Flam. Liq. 3 H226  
 STOT SE 3 H336

**2-Butoxyethanol**

CAS No. 111-76-2  
 EINECS no. 203-905-0  
 Registration no. 01-2119475108-36  
 Concentration >= 1 < 10 %  
 Classification (Regulation (EC) No. 1272/2008)  
 Skin Irrit. 2 H315  
 Acute Tox. 4 H332  
 Acute Tox. 4 H312  
 Acute Tox. 4 H302  
 Eye Irrit. 2 H319

ATE oral 1.200 mg/kg  
 cATpE dermal 1.100 mg/kg  
 cATpE inhalative, Dust/Mist 1,5 mg/l  
 cATpE inhalative, Vapors 11 mg/l

**Further ingredients**

**Dimethyl ether**

CAS No. 115-10-6  
 EINECS no. 204-065-8  
 Registration no. 01-2119472128-37  
 Concentration >= 25 < 50 %  
 [5]  
 Classification (Regulation (EC) No. 1272/2008)  
 Flam. Gas 1 H220  
 Press. Gas

**Note**

[5] Substance with EU occupational exposure limits

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**General information**

In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious place in recovery position and seek medical advice.



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#### **After inhalation**

Remove affected person from danger area. Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, administer artificial respiration. Summon a doctor immediately.

#### **After skin contact**

Remove contaminated clothing. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners. Consult a doctor if skin irritation persists.

#### **After eye contact**

Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice. Take medical treatment.

#### **After ingestion**

As the product is in a pressurised gas container, ingestion is not expected. If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Keep at rest. Do NOT induce vomiting. Summon a doctor immediately.

#### **Adhere to personal protective measures when giving first aid**

Use personal protective equipment in case of possible contact with the product (see section 8).

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

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11. Further symptoms are possible.

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

#### **Hints for the physician / treatment**

Treat symptomatically

## **SECTION 5: Firefighting measures**

### **5.1. Extinguishing media**

#### **Suitable extinguishing media**

Alcohol resistant foam, CO<sub>2</sub>, powders, water spray/mist

#### **Non suitable extinguishing media**

water jet

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

In the event of fire the following can be released: Carbon monoxide (CO); Carbon dioxide (CO<sub>2</sub>); dense black smoke; Exposure to decomposition products may cause a health hazard. Appropriate breathing apparatus may be required.

### **5.3. Advice for firefighters**

#### **Special protective equipment for fire-fighting**

Use self-contained breathing apparatus. Wear full chemical protective clothing. Fire fighter's clothing must conform to European standard EN469.

#### **Other information**

Cool endangered containers with water spray jet. Do not allow run-off from fire fighting to enter drains or water courses.

## **SECTION 6: Accidental release measures**

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

For non-emergency personnel: Keep away sources of ignition. Remove persons to safety. Ensure adequate ventilation. Keep away unprotected persons. Avoid contact with skin, eyes and clothing. Do not breathe gas/fumes/vapour/spray. For emergency responders: Wear personal protective equipment. Use breathing apparatus if exposed to vapours/dust/aerosol.



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## 6.2. Environmental precautions

Do not allow to enter drains or waterways. If the product contaminates lakes, rivers or sewage, inform appropriate authorities in accordance with local regulations. If the product contaminates lakes, rivers or sewage, inform appropriate authorities in accordance with local regulations.

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

Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13). Clean preferably with a detergent - avoid use of solvents.

## 6.4. Reference to other sections

Information regarding personal protective measures, see Section 8. Information regarding waste disposal, see Section 13.

# SECTION 7: Handling and storage

## 7.1. Precautions for safe handling

### Advice on safe handling

Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits. Provide good ventilation of working area (local exhaust ventilation if necessary). In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. Operators should wear anti-static footwear and clothing and floors should be of the conducting type. Isolate from sources of heat, sparks and open flame. Avoid skin and eye contact. Avoid the inhalation of particulates and spray mist arising from the application of this mixture. Smoking, eating and drinking shall be prohibited in application area. For personal protection see Section 8. Comply with the health and safety at work laws. Do not allow to enter drains or water courses.

### Advice on protection against fire and explosion

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use. Keep away from sources of ignition - No smoking. Take action to prevent static discharges. Do not spray on a naked flame or any incandescent material. Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. With conveying and handling possibility of electrostatic charges.

### Classification of fires / temperature class / Ignition group / Dust explosion class

Classification of fires	C (Flammable gases)
Temperature class	T2

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

### Requirements for storage rooms and vessels

Store in accordance with national regulation

### Further information on storage conditions

Observe label precautions. Keep in original containers. Keep container dry in a cool, well-ventilated place. Protect from direct sunlight. Protect from warmth. Keep away from sources of ignition. No smoking. Prevent unauthorised access.

## 7.3. Specific end use(s)

Spray varnish

# SECTION 8: Exposure controls/personal protection \*\*\*

## 8.1. Control parameters

### Exposure limit values

Dimethyl ether

List

EH40



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Type	WEL			
Value	766	mg/m <sup>3</sup>	400	ppm(V)
Short term exposure limit	958	mg/m <sup>3</sup>	500	ppm(V)
Status:	2011			

**Dimethyl ether**

List	EU			
Value	1920	mg/m <sup>3</sup>	1000	ppm(V)
Remarks:	2000/39/EG			

**Ethyl acetate**

List	EH40			
Type	WEL			
Value			200	ppm(V)
Short term exposure limit			400	ppm(V)
Status:	2011			

**Ethyl acetate**

List	EU			
Value	734	mg/m <sup>3</sup>	200	ppm(V)
Short term exposure limit	1468	mg/m <sup>3</sup>	400	ppm(V)
Remarks:	(EU) 2017/164			

**2-Methoxy-1-methylethyl acetate**

List	EH40			
Type	WEL			
Value	274	mg/m <sup>3</sup>	50	ppm(V)
Short term exposure limit	548	mg/m <sup>3</sup>	100	ppm(V)
Skin resorption / sensibilisation:	Sk: 2011			

**2-Methoxy-1-methylethyl acetate**

List	EU			
Value	275	mg/m <sup>3</sup>	50	ppm(V)
Short term exposure limit	550	mg/m <sup>3</sup>	100	ppm(V)
Skin resorption / sensibilisation:	Skin; Remarks: 2000/39/EG			

**Propan-2-ol**

List	EH40			
Type	WEL			
Value	999	mg/m <sup>3</sup>	400	ppm(V)
Short term exposure limit	1250	mg/m <sup>3</sup>	500	ppm(V)
Status:	2011			

**2-Butoxyethanol**

List	EH40			
Type	WEL			
Value			25	ppm(V)
Short term exposure limit			50	ppm(V)
Skin resorption / sensibilisation:	Sk: 2011			

**2-Butoxyethanol**

List	EU			
Value	98	mg/m <sup>3</sup>	20	ppm(V)
Short term exposure limit	246	mg/m <sup>3</sup>	50	ppm(V)
Skin resorption / sensibilisation:	Skin; Remarks: 2000/39/EG			

**n-Butyl acetate**

List	EH40			
Type	WEL			
Value	724	mg/m <sup>3</sup>	150	ppm(V)
Short term exposure limit	966	mg/m <sup>3</sup>	200	ppm(V)
Status:	2011			

**n-Butyl acetate**

List	EU			
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Value	241	mg/m <sup>3</sup>	50	ppm(V)
Short term exposure limit	723	mg/m <sup>3</sup>	150	ppm(V)
Remarks: (EU) 2019/1831				

**Derived No/Minimal Effect Levels (DNEL/DMEL) \*\*\***

**Ethyl acetate**

Type of value	Derived No Effect Level (DNEL)			
Reference group	Worker			
Duration of exposure	Acute			
Route of exposure	inhalative			
Concentration	1468			mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)			
Reference group	Worker			
Duration of exposure	Acute			
Route of exposure	inhalative			
Mode of action	Local effects			
Concentration	1468			g/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)			
Reference group	Worker			
Route of exposure	dermal			
Mode of action	Chronic effects			
Concentration	63			mg/kg

Type of value	Derived No Effect Level (DNEL)			
Reference group	Worker			
Route of exposure	inhalative			
Mode of action	Chronic effects			
Concentration	734			mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)			
Reference group	Worker			
Route of exposure	inhalative			
Mode of action	Chronic effects			
Concentration	734			mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)			
Reference group	Consumer			
Route of exposure	inhalative			
Mode of action	Acute effects			
Concentration	734			mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)			
Reference group	Consumer			
Route of exposure	inhalative			
Mode of action	Local effects			
Concentration	734			mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)			
Reference group	Consumer			
Route of exposure	dermal			
Mode of action	Chronic effects			
Concentration	37			mg/kg

Type of value	Derived No Effect Level (DNEL)			
Reference group	Consumer			
Route of exposure	inhalative			

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Mode of action Chronic effects  
 Concentration 367 mg/m<sup>3</sup>

Type of value Derived No Effect Level (DNEL)  
 Reference group Consumer  
 Route of exposure oral

Mode of action Chronic effects  
 Concentration 4,5 mg/m<sup>3</sup>

Type of value Derived No Effect Level (DNEL)  
 Reference group Consumer  
 Route of exposure inhalative

Mode of action Local effects  
 Concentration 367 mg/m<sup>3</sup>

**2-Methoxy-1-methylethyl acetate**

Type of value Derived No Effect Level (DNEL)  
 Reference group Worker  
 Duration of exposure Long term

Route of exposure dermal  
 Mode of action Systemic effects  
 Concentration 796 mg/kg/d

Type of value Derived No Effect Level (DNEL)  
 Reference group Worker  
 Duration of exposure Long term

Route of exposure inhalative  
 Mode of action Systemic effects  
 Concentration 275 mg/m<sup>3</sup>

Type of value Derived No Effect Level (DNEL)  
 Reference group Consumer  
 Duration of exposure Long term

Route of exposure dermal  
 Mode of action Systemic effects  
 Concentration 320 mg/kg/d

Type of value Derived No Effect Level (DNEL)  
 Reference group Consumer  
 Duration of exposure Long term

Route of exposure inhalative  
 Mode of action Systemic effects  
 Concentration 33 mg/m<sup>3</sup>

Type of value Derived No Effect Level (DNEL)  
 Reference group Consumer  
 Duration of exposure Long term

Route of exposure inhalative  
 Mode of action Local effects  
 Concentration 33 mg/m<sup>3</sup>

Type of value Derived No Effect Level (DNEL)  
 Reference group Consumer  
 Duration of exposure Long term

Route of exposure oral  
 Mode of action Systemic effects  
 Concentration 36 mg/kg/d



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Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Lifetime	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	550	mg/m <sup>3</sup>

**n-Butyl acetate**

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Short term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	600	mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Short term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	600	mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	300	mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	300	mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Short term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	300	mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Short term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	300	mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	35,7	mg/m <sup>3</sup>

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Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	35,7	mg/m <sup>3</sup>
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	11	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Short term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	11	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	6	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Short term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	6	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	2	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Short term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	2	mg/kg/d
<b>Propan-2-ol</b>		
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	500	mg/m <sup>3</sup>



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Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	888	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	89	mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	319	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	26	mg/kg/d

**2-Butoxyethanol**

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Acute	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	89	mg/kg

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Short term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	1091	mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Short term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	147	mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	125	mg/kg

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Type of value Derived No Effect Level (DNEL)  
 Reference group Worker  
 Duration of exposure Long term  
 Route of exposure inhalative  
 Mode of action Systemic effects  
 Concentration 98 mg/m<sup>3</sup>

Type of value Derived No Effect Level (DNEL)  
 Reference group Consumer  
 Duration of exposure Acute  
 Route of exposure dermal  
 Mode of action Systemic effects  
 Concentration 89,5 mg/kg

Type of value Derived No Effect Level (DNEL)  
 Reference group Consumer  
 Duration of exposure Acute  
 Route of exposure inhalative  
 Mode of action Systemic effects  
 Concentration 426 mg/m<sup>3</sup>

Type of value Derived No Effect Level (DNEL)  
 Reference group Consumer  
 Duration of exposure Acute  
 Route of exposure oral  
 Mode of action Systemic effects  
 Concentration 26,7 mg/kg

Type of value Derived No Effect Level (DNEL)  
 Reference group Consumer  
 Duration of exposure Acute  
 Route of exposure inhalative  
 Mode of action Local effects  
 Concentration 147 mg/kg

Type of value Derived No Effect Level (DNEL)  
 Reference group Consumer  
 Duration of exposure Long term  
 Route of exposure dermal  
 Mode of action Systemic effects  
 Concentration 75 mg/kg

Type of value Derived No Effect Level (DNEL)  
 Reference group Consumer  
 Duration of exposure Long term  
 Route of exposure inhalative  
 Mode of action Systemic effects  
 Concentration 59 mg/m<sup>3</sup>

Type of value Derived No Effect Level (DNEL)  
 Reference group Consumer  
 Duration of exposure Long term  
 Route of exposure oral  
 Mode of action Systemic effects  
 Concentration 6,3 mg/kg



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**Dimethyl ether**

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	1894	mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	471	mg/m <sup>3</sup>

**Predicted No Effect Concentration (PNEC) \*\*\***

**Ethyl acetate**

Type of value	PNEC	
Type	Water	
Concentration	0,26	mg/l

Type of value	PNEC	
Type	Aquatic	
Concentration	0,026	mg/l

Type of value	PNEC	
Type	Freshwater sediment	
Concentration	0,34	mg/kg

Type of value	PNEC	
Type	Marine sediment	
Concentration	0,034	mg/kg

Type of value	PNEC	
Type	Soil	
Concentration	0,22	mg/kg

**2-Methoxy-1-methylethyl acetate**

Reference substance	2-Methoxy-1-methylethyl acetate	
Type of value	PNEC	
Type	Freshwater	
Concentration	0,635	mg/l

Type of value	PNEC	
Type	Freshwater sediment	
Concentration	3,29	mg/kg

Type of value	PNEC	
Type	Soil	
Concentration	0,29	mg/kg
Source	Literature value	

Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	100	mg/l
Source	Literature value	

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Type of value	PNEC	
Type	Marine sediment	
Concentration	0,329	mg/kg
Source	Literature value	

Type of value	PNEC	
Type	Saltwater	
Concentration	0,0635	mg/l

Type of value	PNEC	
Type	Water (intermittent release)	
Concentration	6,35	mg/l

**n-Butyl acetate**

Type of value	PNEC	
Type	Freshwater	
Concentration	0,18	mg/l

Type of value	PNEC	
Type	Saltwater	
Concentration	0,018	mg/l

Type of value	PNEC	
Type	Freshwater sediment	
Concentration	0,981	mg/kg

Type of value	PNEC	
Type	Marine sediment	
Concentration	0,0981	mg/kg

Type of value	PNEC	
Type	Soil	
Concentration	0,0903	mg/kg

Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	35,6	mg/l

Type of value	PNEC	
Type	Water (intermittent release)	
Concentration	0,36	mg/l

**Propan-2-ol**

Type of value	PNEC	
Type	Freshwater	
Concentration	140,9	mg/l

Type of value	PNEC	
Type	Saltwater	
Concentration	140,9	mg/l

Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	2251	mg/l

Type of value	PNEC	
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Type	Freshwater sediment	
Concentration	552	mg/kg
Type of value	PNEC	
Type	Marine sediment	
Concentration	552	mg/kg
Type of value	PNEC	
Type	Soil	
Concentration	28	mg/kg

**2-Butoxyethanol**

Type of value	PNEC	
Type	Freshwater	
Concentration	8,8	mg/l
Type of value	PNEC	
Type	Soil	
Concentration	2,8	mg/kg
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	34,6	mg/kg
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	463	mg/l
Type of value	PNEC	
Type	Saltwater	
Concentration	0,88	mg/l
Type of value	PNEC	
Type	Marine sediment	
Concentration	3,46	mg/kg

**Dimethyl ether**

Type of value	PNEC	
Type	Freshwater	
Concentration	0,155	mg/l
Type of value	PNEC	
Type	Water (intermittent release)	
Concentration	1,549	mg/l
Type of value	PNEC	
Type	Saltwater	
Concentration	0,016	mg/l
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	160	mg/l
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	0,681	mg/kg



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Type of value	PNEC		
Type	Saltwater		
Concentration	0,069		mg/kg

Type of value	PNEC		
Type	Soil		
Concentration	0,045		mg/kg

## 8.2. Exposure controls

### Exposure controls

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

### General protective and hygiene measures

Observe the usual precautions for handling chemicals. Keep away from food, drink and animal feedingstuffs. Do not inhale gases/vapours/aerosols. Avoid contact with skin and eyes. Wash hands and / or face before breaks and after work. Take off dirty, soaked clothes immediately. Wash soiled clothing before re-use. Store work clothing separately.

### Respiratory protection

If workers could be exposed to concentrations above the exposure limit they should use a respirator to EN 140, fitted with a filter suitable for both particulates and vapours, to EN 14387, with an assigned protection factor of at least 10 (e.g. A2P3). Selection of any respiratory protective equipment should ensure that it is adequate to reduce exposure to protect the worker's health and is suitable for the wearer, task and environment, including consideration of the facial features of the wearer.

### Hand protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

Use gloves tested according to EN 374.

For prolonged or repeated handling, use

Appropriate Material	Butyl rubber		
Material thickness	> 0,7	mm	
Breakthrough time	> 30	min	

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

The performance or effectiveness of the glove may be reduced by physical/ chemical damage and poor maintenance.

Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.

Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.

### Eye protection

Use safety eyewear tested according to EN 166 designed to protect against splash of liquids.

### Body protection

Personnel should wear anti-static clothing made of natural fibre or of high temperature resistant synthetic fibre. Cotton or cotton/synthetic overalls or coveralls are normally suitable.

### Environmental exposure controls

Do not allow to enter drains or water courses. If the legally prescribed emission limits are exceeded, a suitable exhaust air purification system must be installed.

## SECTION 9: Physical and chemical properties





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## 9.1. Information on basic physical and chemical properties

<b>Physical state</b>	Aerosol		
<b>Colour</b>	colourless		
<b>Odour</b>	solvent-like		
<b>Melting point</b>			
Remarks	Not applicable due to nature of the product		
<b>Freezing point</b>			
Remarks	Not applicable due to nature of the product		
<b>Boiling point or initial boiling point and boiling range</b>			
Value	<	0	°C
<b>Flammability</b>	Extremely flammable aerosol.		
<b>Upper and lower explosive limits</b>			
Lower explosion limit		2	%(V)
Upper explosion limit		18,6	%(V)
<b>Flash point</b>			
Value	<	0	°C
<b>Ignition temperature</b>			
Value	>	300	°C
<b>Decomposition temperature</b>			
Remarks	not determined		
<b>pH value</b>			
Remarks	Not applicable		
Remarks	substance/mixture is non-soluble (in water)		
<b>Viscosity</b>			
Remarks			
Remarks	not determined		
<b>Solubility(ies)</b>			
Remarks	Not applicable due to nature of the product		
<b>Partition coefficient n-octanol/water (log value)</b>			
Remarks	Not applicable due to nature of the product		
<b>Vapour pressure</b>			
Remarks	Not applicable due to nature of the product		
<b>Density and/or relative density</b>			
Value		0,79	g/cm <sup>3</sup>
Temperature		20	°C
<b>Relative vapour density</b>			
Value	>	1	
<b>Particle characteristics</b>			
Remarks	Not applicable due to nature of the product		

## 9.2. Other information

### Other information

The physical specifications are approximate values and refer to the used safety relevant component(s).

## SECTION 10: Stability and reactivity

### 10.1. Reactivity



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No hazardous reactions when stored and handled according to prescribed instructions.

### 10.2. Chemical stability

Stable at temperatures below 50 °C.

### 10.3. Possibility of hazardous reactions

Keep away from oxidising agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

### 10.4. Conditions to avoid

Protect from heat and direct sunlight. When exposed to high temperatures may produce hazardous decomposition products. Avoid damage to the aerosol containers, for example by falling down. Never pierce aerosol containers, even after use. Avoid high concentrations of solvent vapours. Observe the notes on ventilation (section 8).

### 10.5. Incompatible materials

Oxidising agents, strongly alkaline substances, Strongly acidic substances

### 10.6. Hazardous decomposition products

See chapter 5.2 (Firefighting measures - Special hazards arising from the substance or mixture). No decomposition during or intended use (see section 1).

## SECTION 11: Toxicological information

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

#### Acute oral toxicity

ATE	>	2.000	mg/kg
Method	calculated value (Regulation (EC) No. 1272/2008)		

#### Acute oral toxicity (Components)

##### 2-Butoxyethanol

ATE	1200	mg/kg
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##### n-Butyl acetate

Species	rat (female)	
LD50	10760	mg/kg
Method	OECD 423	

#### Acute dermal toxicity

ATE	>	2.000	mg/kg
Method	calculated value (Regulation (EC) No. 1272/2008)		

#### Acute dermal toxicity (Components)

##### n-Butyl acetate

Species	Rats (male/female)	
LD50	14112	mg/kg
Method	OECD 402	

#### Acute inhalational toxicity

ATE	>	20	mg/l
Administration/Form	Vapors		
Method	calculated value (Regulation (EC) No. 1272/2008)		
ATE	>	5	mg/l
Administration/Form	Dust/Mist		
Method	calculated value (Regulation (EC) No. 1272/2008)		
Remarks	Based on available data, the classification criteria are not met.		

#### Acute inhalative toxicity (Components)

##### n-Butyl acetate

Species	Rats (male/female)		
LC50	>	21	mg/l



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Duration of exposure 4 h

Method OECD 403

**Skin corrosion/irritation**

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

**Skin corrosion/irritation (Components)****2-Methoxy-1-methylethyl acetate**Species rabbit  
evaluation non-irritant**Serious eye damage/irritation**evaluation irritant  
Remarks The classification criteria are met.**Sensitization**

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

**Sensitization (Components)****2-Butoxyethanol**Route of exposure dermal  
Species guinea pig  
evaluation non-sensitizing**Mutagenicity**

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

**Reproductive toxicity**

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

**Carcinogenicity**

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

**Specific Target Organ Toxicity (STOT)****Single exposure**Remarks The classification criteria are met.  
evaluation May cause drowsiness or dizziness.**Repeated exposure**

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

**Aspiration hazard**

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

**Endocrine disrupting properties with respect to humans**

The product does not contain a substance that has endocrine disrupting properties with respect to humans.

**Experience in practice**

Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation. The liquid splashed in the eyes may cause irritation. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

**Other information**

There are no data available on the mixture itself.  
The mixture has been assessed following the additivity method of the CLP Regulation (EC) No



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1272/2008 and classified for toxicological hazards accordingly.

## **SECTION 12: Ecological information**

### **12.1. Toxicity**

#### **General information**

There are no data available on the mixture itself. Do not allow to enter drains or water courses. The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008 and is not classified as dangerous for the environment.

### **12.2. Persistence and degradability**

#### **General information**

There are no data available on the mixture itself.

### **12.3. Bioaccumulative potential**

#### **General information**

There are no data available on the mixture itself.

#### **Partition coefficient n-octanol/water (log value)**

Remarks Not applicable due to nature of the product

### **12.4. Mobility in soil**

#### **General information**

There are no data available on the mixture itself.

### **12.5. Results of PBT and vPvB assessment**

#### **General information**

There are no data available on the mixture itself.

#### **Results of PBT and vPvB assessment**

The product contains no PBT substances  
The product contains no vPvB substances.

### **12.6 Endocrine disrupting properties**

#### **Endocrine disrupting properties with respect to the environment**

The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms.

### **12.7. Other adverse effects**

#### **General information**

There are no data available on the mixture itself.

## **SECTION 13: Disposal considerations**

### **13.1. Waste treatment methods**

#### **Disposal recommendations for the product**

Do not allow to enter drains or water courses.

Wastes and emptied containers should be classified in accordance with relevant national regulation.

The European Waste Catalogue classification of this product, when disposed of as waste is

EWG waste code 08 01 11\* waste paint and varnish containing organic solvents or other dangerous substances

If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned.

For further information contact your local waste authority.

#### **Disposal recommendations for packaging**



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Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers.

Empty containers must be scrapped or reconditioned.

Not emptied containers are hazardous waste.

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

## SECTION 14: Transport information

	Land transport ADR/RID	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
Tunnel restriction code	D		
14.1. UN number	1950	1950	1950
14.2. UN proper shipping name	AEROSOLS	AEROSOLS	Aerosols, flammable
14.3. Transport hazard class(es)	2	2.1	2.1
Label			
Limited Quantity	11		
Transport category	2		
14.5. Environmental hazards	-		

### Information for all modes of transport

#### 14.6. Special precautions for user

Transport within the user's premises:

Always transport in closed containers that are upright and secure.

Ensure that persons transporting the product know what to do in the event of an accident or spillage.

### Other information

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

Not applicable

## SECTION 15: Regulatory information

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

#### Major-accident categories acc. 96/82/EC

Category	8	Extremely flammable	10.000	kg	50.000	kg
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#### VOC

VOC (CH)	86,84	%	686	g/cm <sup>3</sup>
VOC (EU)	86,84	%	686	g/cm <sup>3</sup>

#### Other regulations, restrictions and prohibition regulations



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The product complies with the requirements of the Persistent Organic Pollutants Regulation 2019/1021.  
The product complies with the requirements of Regulation 1005/2009 on substances that deplete the ozone layer.

The product is not subject to Regulation 649/2012 on the export and import of dangerous chemicals.

### Other information

The product does not contain substances of very high concern (SVHC).

## 15.2. Chemical safety assessment

For this preparation a chemical safety assessment has not been carried out.

## SECTION 16: Other information

### Hazard statements listed in Chapter 3

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.

### CLP categories listed in Chapter 3

Acute Tox. 4	Acute toxicity, Category 4
Eye Irrit. 2	Eye irritation, Category 2
Flam. Liq. 2	Flammable liquid, Category 2
Flam. Liq. 3	Flammable liquid, Category 3
Skin Irrit. 2	Skin irritation, Category 2
STOT SE 3	Specific target organ toxicity - single exposure, Category 3

### Abbreviations

ADR: Accord européen relatif au transport international des marchandises Dangereuses par Route  
 RID: Règlement concernant le transport international ferroviaire de marchandises dangereuses  
 GGVSee: Gefahrgutverordnung See  
 IMDG: International Maritime Code for Dangerous Goods  
 ICAO: International Civil Aviation Organization  
 IATA: International Air Transport Association  
 CAS: Chemical Abstracts Service  
 EINECS: European Inventory of Existing Commercial Chemical Substances  
 ELINCS: European List of Notified Chemical Substances  
 EmS: Emergency Schedules  
 AICS: Australian Inventory of Chemical Substances  
 MITI: Ministry of International Trade and Industry (Japan)  
 TSCA: Toxic Substances Control Act (USA)  
 VOC: Volatile Organic Compound  
 LD: Lethal dose  
 LC: Lethal concentration  
 SVHC: Substances of very high concern  
 DNEL: Derived no effect level  
 PNEC: Predicted no effect concentration  
 UN: United Nations  
 OEL: Occupational exposure limit

### Supplemental information

Relevant changes compared with the previous version of the safety data sheet are marked with: \*\*\*  
 This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.  
 The information in this Safety Data Sheet is based on the present state of knowledge and current legislation.

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It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications. The product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions. As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with. The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation.