

Trade name: Hesse HYDRO Metallic lacquer HB 65445-89239

Version: 13 / GB

Revision: 30.07.2021

Replaces Version: 12 / GB

Print date: 30.07.21

## 1. Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Hesse HYDRO Metallic lacquer HB 65445-89239

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

#### Use of the substance/preparation

Surface treatment of wood and other materials

#### Identified Uses

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	REACHSET 1000
SU3	Industrial uses: Uses of substances as such or in preparations at industrial sites
ERC4	Industrial use of processing aids in processes and products, not becoming part of articles
ERC5	Industrial use resulting in inclusion into or onto a matrix
PROC7	Industrial spraying
	-----
	REACHSET 2001
SU22	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
ERC8a	Wide dispersive indoor use of processing aids in open systems
ERC8c	Wide dispersive indoor use resulting in inclusion into or onto a matrix
PROC11	Non industrial spraying

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

#### Manufacturer

Hesse GmbH & Co. KG  
Warendorfer Strasse 21  
59075 Hamm  
Telephone no. +49 (0) 2381 963-00  
Fax no. +49 (0) 2381 963-849  
E-mail address ps@hesse-lignal.de

### 1.4. Emergency telephone number

Germany: +49 (0) 2381 788-612

## 2. Hazards identification

### 2.1. Classification of the substance or mixture

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

This product is not classified hazardous in accordance with Regulation (EC) No 1272/2008.

### 2.2. Label elements

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

EUH208 Contains 1,2-benzisothiazol-3(2H)-one, reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3- one [EC no. 220-239-6] (3:1); reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-4-isothiazolin-3- one [EC no. 220-239-6] (3:1), 2,4,7,9-tetramethyldec-5-yne-4,7-diol, May produce an allergic reaction.

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**Supplemental information**

EUH210 Safety data sheet available on request.

**2.3. Other hazards**

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB) (if not listed in Section 3).

**3. Composition/information on ingredients****Hazardous ingredients****2-butoxyethanol**

CAS No.	111-76-2			
EINECS no.	203-905-0			
Registration no.	01-2119475108-36			
Concentration	>= 1	<	5	%
Classification (Regulation (EC) No. 1272/2008)				
	Acute Tox. 4	H302		Route of exposure: Oral exposure
	Acute Tox. 4	H312		Route of exposure: Dermal exposure
	Acute Tox. 4	H332		Route of exposure: Inhalation exposure
	Eye Irrit. 2	H319		
	Skin Irrit. 2	H315		

**2-(2-butoxyethoxy)ethanol**

CAS No.	112-34-5			
EINECS no.	203-961-6			
Registration no.	01-2119475104-44			
Concentration	>= 1	<	4	%
Classification (Regulation (EC) No. 1272/2008)				
	Eye Irrit. 2	H319		

**2-dimethylaminoethanol**

CAS No.	108-01-0			
EINECS no.	203-542-8			
Registration no.	01-2119492298-24			
Concentration	>= 0,1	<	1	%
Classification (Regulation (EC) No. 1272/2008)				
	Flam. Liq. 3	H226		
	Acute Tox. 3	H331		Route of exposure: Inhalation exposure
	Acute Tox. 4	H312		Route of exposure: Dermal exposure
	Acute Tox. 4	H302		Route of exposure: Oral exposure
	Skin Corr. 1B	H314		
	STOT SE 3	H335		Respiratory tract

Concentration limits (Regulation (EC) No. 1272/2008)

STOT SE 3	H335	>= 5
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**2,4,7,9-tetramethyldec-5-yne-4,7-diol**

CAS No. 126-86-3

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EINECS no. 204-809-1  
 Registration no. 01-2119954390-39  
 Concentration  $\geq$  0,1 < 1 %  
 Classification (Regulation (EC) No. 1272/2008)  
 Eye Dam. 1 H318  
 Skin Sens. 1B H317  
 Aquatic Chronic 3 H412

**1,2-benzisothiazol-3(2H)-one**

CAS No. 2634-33-5  
 EINECS no. 220-120-9  
 Concentration < 0,05 %  
 Classification (Regulation (EC) No. 1272/2008)  
 Acute Tox. 4 H302  
 Skin Irrit. 2 H315  
 Eye Dam. 1 H318  
 Skin Sens. 1 H317  
 Aquatic Acute 1 H400  
 Aquatic Chronic 2 H411

Concentration limits (Regulation (EC) No. 1272/2008)

Skin Sens. 1 H317  $\geq$  0,05 %

**reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H - isothiazol-3- one [EC no. 220-239-6] (3:1); reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-4-isothiazolin-3- one [EC no. 220-239-6] (3:1)**

CAS No. 55965-84-9  
 EINECS no. 247-500-7  
 Concentration < 0,001 %  
 Classification (Regulation (EC) No. 1272/2008)  
 Acute Tox. 2 H330  
 Acute Tox. 2 H310  
 Acute Tox. 3 H301  
 Skin Corr. 1B H314  
 Skin Sens. 1 H317  
 Aquatic Acute 1 H400  
 Aquatic Chronic 1 H410  
 Eye Dam. 1 H318

Concentration limits (Regulation (EC) No. 1272/2008)

Skin Corr. 1C H314  $\geq$  0,6 %  
 Skin Irrit. 2 H315  $\geq$  0,06 %  
 Eye Irrit. 2 H319  $\geq$  0,06 %  
 Skin Sens. 1 H317  $\geq$  0,0015 %  
 Eye Dam. 1 H318  $\geq$  0,6 %  
 Aquatic Chronic 1 H410 M = 100  
 Aquatic Acute 1 H400 M = 100

**Further ingredients****aluminium powder (stabilised)**

CAS No. 7429-90-5  
 EINECS no. 231-072-3  
 Registration no. 01-2119529243-45

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Concentration	>=	1	<	10	%
Advice: [3]					
Classification (Regulation (EC) No. 1272/2008)					
		Water-react. 2		H261	
		Flam. Sol. 1		H228	

**Note**

[3] Substance with occupational exposure limits

**4. First aid measures****4.1. Description of first aid measures****General information**

Remove affected person from danger area, lay him down. In all cases of doubt, or when symptoms persist, seek medical attention. Get medical advice/attention if you feel unwell. First aider: Pay attention to self-protection!

**After inhalation**

When spray fog inhaled, seek medical aid.

**After skin contact**

Wash off immediately with soap and water. 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**

Do not induce vomiting. Take medical treatment.

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

Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

**4.3. Indication of any immediate medical attention and special treatment needed****Hints for the physician / treatment**

Treat symptomatically.

**5. Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Recommended: alcohol resistant foam, CO<sub>2</sub>, powders, water spray/mist

**Non suitable extinguishing media**

Do not use a solid water stream as it may scatter and spread fire.

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

Fire will produce dense black smoke. In a fire, hazardous decomposition products may be produced. Exposure to decomposition products may cause a health hazard.

**5.3. Advice for firefighters****Special protective equipment for fire-fighting**

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In case of combustion evolution of dangerous gases possible. Use self-contained breathing apparatus.

**Other information**

Do not allow run-off from fire fighting to enter drains or water courses. Cool closed containers exposed to fire with water. Standard procedure for chemical fires.

**6. Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Do not inhale vapours. Do not inhale gases. Do not inhale mist.

**6.2. Environmental precautions**

Do not allow to enter drains or waterways. Do not allow to enter soil, waterways or waste water canal. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

**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 contaminated floors and objects thoroughly with water and detergents, observing environmental regulations. Do NOT use solvents or thinners. Send in suitable containers for recovery or disposal.

**6.4. Reference to other sections**

Refer to protective measures listed in Sections 7 and 8.

**7. Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

Keep container tightly closed and dry in a cool, well-ventilated place. Avoid contact with skin and eyes. Avoid inhalation of vapour and spray mist. Do not eat, drink or smoke when using this product. Use personal protective clothing. For personal protection see Section 8.

**Advice on protection against fire and explosion**

Fight fire with normal precautions from a reasonable distance.

**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. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

**Hints on storage assembly**

Store away from oxidising agents, from strongly alkaline and strongly acid materials.

**Storage classes**

Storage class according to TRGS 510      10                      Flammable liquids

**Further information on storage conditions**

Keep away from heat. Protect from sunlight. Keep away from sources of ignition - No smoking. Store in accordance with the particular national regulations.

**8. Exposure controls/personal protection****8.1. Control parameters****Exposure limit values**

2-butoxyethanol

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List	Directive 2017/164 EG			
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: H; Status: 12/2009				

**2-butoxyethanol**

List	EH40			
Value	123	mg/m <sup>3</sup>	25	ppm(V)
Short term exposure limit	246	mg/m <sup>3</sup>	50	ppm(V)
Skin resorption / sensibilisation: Sk; Status: 01/2020				

**2-(2-butoxyethoxy)ethanol**

List	EH40			
Value	67,5	mg/m <sup>3</sup>	10	ppm(V)
Short term exposure limit	101,2	mg/m <sup>3</sup>	15	ppm(V)
Status: 01/2020				

**2-(2-butoxyethoxy)ethanol**

List	Directive 2017/164 EG			
Value	67,5	mg/m <sup>3</sup>	10	ppm(V)
Short term exposure limit	101,2	mg/m <sup>3</sup>	15	ppm(V)
Status: 12/2009				

**Other information**

-

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

**2-butoxyethanol**

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	Dermal exposure	
Mode of action	Acute effects	
Concentration	89	mg/kg

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	246	mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	Dermal exposure	
Mode of action	Systemic effects	
Concentration	75	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	20	ppm

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Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Short-term	
Route of exposure	Dermal exposure	
Mode of action	Systemic effects	
Concentration	89	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	246	mg/m <sup>3</sup>
Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
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	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	Oral exposure	
Mode of action	Systemic effects	
Concentration	3,2	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Short-term	
Route of exposure	Oral exposure	
Mode of action	Systemic effects	
Concentration	13,4	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	123	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 exposure	
Mode of action	Acute effects	
Concentration	44,5	mg/kg
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	inhalative	

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Mode of action	Acute effects	
Concentration	426	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 exposure	
Mode of action	Systemic effects	
Concentration	6,3	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	Local effects	
Concentration	106,4	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 exposure	
Mode of action	Systemic effects	
Concentration	38	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	inhalative	
Mode of action	Systemic effects	
Concentration	49	mg/m <sup>3</sup>
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Short-term	
Route of exposure	Oral exposure	
Mode of action	Systemic effects	
Concentration	26,7	mg/kg/d
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	135	mg/m <sup>3</sup>
Type of value	Derived No Effect Level (DNEL)	



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Reference group	Consumer	
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	Consumer	
Duration of exposure	Short-term	
Route of exposure	Dermal exposure	
Mode of action	Systemic effects	
Concentration	89	mg/kg/d

**2-(2-butoxyethoxy)ethanol**

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (industrial)	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	14	ppm

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (industrial)	
Duration of exposure	Long-term	
Route of exposure	Dermal exposure	
Mode of action	Systemic effects	
Concentration	20	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (industrial)	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	10	ppm

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (industrial)	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	10	ppm

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	7,5	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 exposure	

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Mode of action	Systemic effects	
Concentration	10	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	5	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	Oral exposure	
Mode of action	Systemic effects	
Concentration	1,3	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	Local effects	
Concentration	5	mg/m <sup>3</sup>

**2-dimethylaminoethanol**

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	Dermal exposure	
Mode of action	Systemic effects	
Concentration	1,04	mg/kg

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	7,4	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	2,2	mg/m <sup>3</sup>

**Predicted No Effect Concentration (PNEC)**

**2-butoxyethanol**

Type of value	PNEC	
Type	Freshwater	
Concentration	8,8	mg/l

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Type of value	PNEC	
Type	Saltwater	
Concentration	0,88	mg/l
Type of value	PNEC	
Type	saltwater sediment	
Concentration	3,46	mg/kg
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	463	mg/l
Type of value	PNEC	
Type	Soil	
Concentration	2,33	mg/kg

**2-(2-butoxyethoxy)ethanol**

Type of value	PNEC	
Type	Freshwater	
Concentration	1	mg/l
Type of value	PNEC	
Type	marine water	
Concentration	0,1	mg/l
Type of value	PNEC	
Type	Fresh water sediment	
Concentration	4	mg/kg
Type of value	PNEC	
Type	saltwater sediment	
Concentration	0,4	mg/kg
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	200	mg/l
Type of value	PNEC	
Type	Soil	
Concentration	0,4	mg/l

**2-dimethylaminoethanol**

Type of value	PNEC	
Type	Freshwater	
Concentration	0,0661	mg/l
Type of value	PNEC	
Type	Saltwater	
Concentration	0,00661	mg/l
Type of value	PNEC	
Conditions	sporadic release	
Concentration	0,0661	mg/l

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Type of value	PNEC		
Type	Fresh water sediment		
Concentration	0,0529		mg/kg
Type of value	PNEC		
Type	Soil		
Concentration	0,0177		mg/kg
Type of value	PNEC		
Type	Sewage treatment plant (STP)		
Concentration	10		mg/l

## 8.2. Exposure controls

### Exposure controls

Users are advised to consider national Occupational Exposure Limits or other equivalent values. Provide for sufficient ventilation. This can be achieved by local exhaust or general exhaust air collection. Wear a suitable respirator if the ventilation is not sufficient to keep the solvent vapour concentration below the occupational limit values.

### Respiratory protection

Avoid inhalation of vapour and spray mist. Use breathing apparatus if exposed to vapours/dust/aerosol. Recommended Filter type: Respiratory protection mask with combination filter A/P2

### Hand protection

Protective gloves complying with EN 374.

Glove material

Appropriate Material butyl-rubber

Material thickness  $\geq$  0,5 mm

Breakthrough time  $\geq$  120 min

This recommendation is valid only for the product named in this safety data sheet supplied by us, and only for the indicated intended use purposes.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

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

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

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.

### Eye protection

Wear eye glasses with side protection according to EN 166.

### Body protection

Wear suitable protective clothing. Remove contaminated clothing and wash it before reuse. Wash hands before breaks and after work.

## 9. Physical and chemical properties

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

<b>Form</b>	liquid
<b>Colour</b>	brown

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<b>Odour</b>	characteristic		
<b>Odour threshold</b>			
Remarks	not determined		
<b>pH value</b>			
Value	7,7		
Concentration/H <sub>2</sub> O	100		
<b>Melting point</b>			
Remarks	not determined		
<b>Freezing point</b>			
Remarks	not determined		
<b>Initial boiling point and boiling range</b>			
Remarks	not determined		
<b>Flash point</b>			
Value	> 60		°C
<b>Flammability (solid, gas)</b>			
not determined			
<b>Upper/lower flammability or explosive limits</b>			
Remarks	not determined		
<b>Vapour pressure</b>			
Remarks	not determined		
<b>Vapour density</b>			
Remarks	not determined		
<b>Density</b>			
Value	appr. 1,038		kg/l
Temperature	20	°C	
<b>Solubility in water</b>			
Remarks	not determined		
<b>Solubility(ies)</b>			
Remarks	not determined		
<b>Partition coefficient: n-octanol/water</b>			
Remarks	not determined		
<b>Ignition temperature</b>			
Remarks	not determined		
<b>Decomposition temperature</b>			
Remarks	not determined		
<b>Viscosity</b>			
Remarks	not determined		
<b>Efflux time</b>			
Method	not applicable		
<b>Explosive properties</b>			
evaluation	not determined		
<b>Oxidising properties</b>			

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Remarks not determined

**9.2. Other information****Non-volatile content**

Value	22	%
Method	calculated value	

**10. Stability and reactivity****10.1. Reactivity**

Stable under recommended storage and handling conditions (see section 7).

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

To avoid thermal decomposition, do not overheat.

**10.4. Conditions to avoid**

Isolate from sources of heat, sparks and open flame.

**10.5. Incompatible materials**

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

**10.6. Hazardous decomposition products**Carbon monoxide and carbon dioxide, nitrous oxides (NO<sub>x</sub>), dense black smoke, No decomposition if used as prescribed.**11. Toxicological information****11.1. Information on toxicological effects****Acute oral toxicity**

ATE	> 10.000	mg/kg
Method	calculated value (Regulation (EC) No. 1272/2008)	
Remarks	Based on available data, the classification criteria are not met.	

**Acute oral toxicity (Components)****2-butoxyethanol**

Species	guinea pig	
LD50	1414	mg/kg
Method	OECD 401	
Source	1 (reliable without restriction)	

**2-dimethylaminoethanol**

Species	rat	
LD50	1183	mg/kg
Method	OECD 401	

**1,2-benzisothiazol-3(2H)-one**

Species	rat	
LD50	1193	mg/kg

reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H - isothiazol-3- one [EC no. 220-239-6] (3:1); reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-4-isothiazolin-3- one [EC no. 220-239-6] (3:1)

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ATE	100	mg/kg
Method	conversion value	

**Acute dermal toxicity**

ATE	> 10.000	mg/kg
Method	calculated value (Regulation (EC) No. 1272/2008)	
Remarks	Based on available data, the classification criteria are not met.	

**Acute dermal toxicity (Components)****2-butoxyethanol**

Species	guinea pig	
LD50	435	mg/kg
Source	1 (reliable without restriction)	

**2-dimethylaminoethanol**

Species	rabbit	
LD50	1219	mg/kg

**reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H - isothiazol-3- one [EC no. 220-239-6] (3:1); reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-4-isothiazolin-3- one [EC no. 220-239-6] (3:1)**

ATE	50	mg/kg
Method	conversion	

**Acute inhalational toxicity**

ATE	> 20	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)****2-butoxyethanol**

Species	rat	
LC50	2,56	mg/l
Duration of exposure	4	h
Administration/Form	Dust/Mist	
Source	1 (reliable without restriction)	

**aluminium powder (stabilised)**

Species	rat	
LC50	> 5	mg/l
Duration of exposure	4	h
Remarks	Mist	

**2-dimethylaminoethanol**

Species	rat	
LC50	0,5	mg/l
Duration of exposure	4	h
Administration/Form	Dust/Mist	
Method	conversion value	

**reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H - isothiazol-3- one [EC no. 220-239-6] (3:1); reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-4-isothiazolin-3- one [EC no. 220-239-6] (3:1)**

ATE	0,05	mg/l
Duration of exposure	4	h
Administration/Form	Dust/Mist	
Method	conversion value	

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Remarks Mist

**Skin corrosion/irritation**

Method Calculation method (Regulation (EC) No. 1272/2008)  
 Remarks Based on available data, the classification criteria are not met.

**Skin corrosion/irritation (Components)****2-butoxyethanol**

Species rabbit  
 Duration of exposure 4 h  
 Observation Period 28 d  
 evaluation Irritating to skin and mucous membranes  
 Method EEC 84/449, B.4

**2-dimethylaminoethanol**

Species rabbit

**1,2-benzisothiazol-3(2H)-one**

evaluation Irritating to skin.

reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -  
 isothiazol-3- one [EC no. 220-239-6] (3:1); reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one  
 [EC no. 247-500-7] and 2-methyl-4-isothiazolin-3- one [EC no. 220-239-6] (3:1)

Species rabbit  
 evaluation Severe skin irritation

**Serious eye damage/irritation**

Method Calculation method (Regulation (EC) No. 1272/2008)  
 Remarks Based on available data, the classification criteria are not met.

**Serious eye damage/irritation (Components)****2-butoxyethanol**

Species rabbit  
 Duration of exposure 24 h  
 Observation Period 21 d  
 evaluation Eye irritation  
 Source 1 (reliable without restriction)

**2-(2-butoxyethoxy)ethanol**

Species rabbit  
 evaluation Irritating to eyes.  
 Source 2 (reliable with restrictions)

**2-dimethylaminoethanol****1,2-benzisothiazol-3(2H)-one**

evaluation Irritating to eyes.

**2,4,7,9-tetramethyldec-5-yne-4,7-diol****Sensitization**

Method Calculation method (Regulation (EC) No. 1272/2008)  
 Remarks Based on available data, the classification criteria are not met.

**Sensitization (Components)****1,2-benzisothiazol-3(2H)-one**

Reference substance 1,2-benzisothiazol-3(2H)-one  
 evaluation May cause sensitization by skin contact.

reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -  
 isothiazol-3- one [EC no. 220-239-6] (3:1); reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one



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**[EC no. 247-500-7] and 2-methyl-4-isothiazolin-3- one [EC no. 220-239-6] (3:1)**

Species guinea pig  
 evaluation Causes sensitisation on guinea-pigs.

**2,4,7,9-tetramethyldec-5-yne-4,7-diol**

evaluation May cause sensitization by skin contact.

**Mutagenicity**

Method Calculation method (Regulation (EC) No. 1272/2008)  
 Remarks Based on available data, the classification criteria are not met.

**Reproductive toxicity**

Method Calculation method (Regulation (EC) No. 1272/2008)  
 Remarks Based on available data, the classification criteria are not met.

**Carcinogenicity**

Method Calculation method (Regulation (EC) No. 1272/2008)  
 Remarks Based on available data, the classification criteria are not met.

**Specific Target Organ Toxicity (STOT)****Single exposure**

Method Calculation method (Regulation (EC) No. 1272/2008)  
 Remarks Based on available data, the classification criteria are not met.

**Repeated exposure**

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

**Specific Target Organ Toxicity (STOT) (Components)****2-dimethylaminoethanol****Specific target organ toxicity - single exposure**

evaluation May cause respiratory irritation.  
 Route of exposure inhalative  
 Organs: Respiratory tract

**Aspiration hazard**

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

**Other information**

No toxicological data are available.

**12. Ecological information****12.1. Toxicity****General information**

For this subsection there is no ecotoxicological data available on the product as such.

**Fish toxicity (Components)****1,2-benzisothiazol-3(2H)-one**

Species Oncorhynchus mykiss (rainbow trout)  
 LC50 2,18 mg/l  
 Duration of exposure 96 h

**reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H - isothiazol-3- one [EC no. 220-239-6] (3:1); reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-4-isothiazolin-3- one [EC no. 220-239-6] (3:1)**

Species Oncorhynchus mykiss (rainbow trout)  
 LC50 0,19 mg/l

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Duration of exposure 96 h

**Daphnia toxicity (Components)****1,2-benzisothiazol-3(2H)-one**

Species	Daphnia magna (Water flea)	
EC50	2,94	mg/l
Duration of exposure	48	h

**reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H - isothiazol-3- one [EC no. 220-239-6] (3:1); reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-4-isothiazolin-3- one [EC no. 220-239-6] (3:1)**

Species	Daphnia magna (Water flea)	
EC50	0,16	mg/l
Duration of exposure	48	h

**2,4,7,9-tetramethyldec-5-yne-4,7-diol**

Species	Daphnia magna (Water flea)	
EC50	91	mg/l
Duration of exposure	48	h

**Algae toxicity (Components)**

**reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H - isothiazol-3- one [EC no. 220-239-6] (3:1); reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-4-isothiazolin-3- one [EC no. 220-239-6] (3:1)**

Species	Scenedesmus capricornutum (fresh water algae)	
EC50	0,018	mg/l
Duration of exposure	72	h

**Bacteria toxicity (Components)**

**reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H - isothiazol-3- one [EC no. 220-239-6] (3:1); reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-4-isothiazolin-3- one [EC no. 220-239-6] (3:1)**

Species	activated sludge	
EC50	4,5	mg/l

**12.2. Persistence and degradability****General information**

For this subsection there is no ecotoxicological data available on the product as such.

**Biodegradability (Components)****1,2-benzisothiazol-3(2H)-one**

evaluation Readily biodegradable.

**reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H - isothiazol-3- one [EC no. 220-239-6] (3:1); reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-4-isothiazolin-3- one [EC no. 220-239-6] (3:1)**

evaluation Not readily biodegradable.

**12.3. Bioaccumulative potential****General information**

For this subsection there is no ecotoxicological data available on the product as such.

**Partition coefficient: n-octanol/water**

Remarks not determined

**12.4. Mobility in soil**

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**General information**

For this subsection there is no ecotoxicological data available on the product as such.

**Mobility in soil**

no data available

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

**General information**

For this subsection there is no ecotoxicological data available on the product as such.

**12.6. Other adverse effects**

**General information**

For this subsection there is no ecotoxicological data available on the product as such.

**13. Disposal considerations**

**13.1. Waste treatment methods**

**Disposal recommendations for the product**

EWC waste code	080111 - waste paint and varnish containing organic solvents or other dangerous substances
EWC waste code	200127 - paint, inks, adhesives and resins containing dangerous substances

Where possible recycling is preferred to disposal or incineration.  
Do not allow to enter drains or waterways.

**modified product**

EWC waste code	080115 - aqueous sludges containing paint or varnish containing organic solvents or other dangerous substances
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**Dried residues**

EWC waste code	080112 - waste lacquers and waste paint except those falling under 080111
----------------	---

**Disposal recommendations for packaging**

EWC waste code	150110 - packaging containing residues of or contaminated by dangerous substances
----------------	---

Completely emptied packagings can be given for recycling.

**14. Transport information**

	Land transport ADR/RID	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
<b>14.1. UN number</b>	Not classified as dangerous in the meaning of transport regulations.	Not classified as dangerous in the meaning of sea and air transport regulations.	Not a dangerous substance as defined in the above regulations.

**15. Regulatory information**

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

VOC

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VOC (EU)	3,5	%	37	g/l
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**16. Other information****Hazard statements listed in Chapter 3**

H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

**CLP categories listed in Chapter 3**

Acute Tox. 2	Acute toxicity, Category 2
Acute Tox. 3	Acute toxicity, Category 3
Acute Tox. 4	Acute toxicity, Category 4
Aquatic Acute 1	Hazardous to the aquatic environment, acute, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic, Category 3
Eye Dam. 1	Serious eye damage, Category 1
Eye Irrit. 2	Eye irritation, Category 2
Flam. Liq. 3	Flammable liquid, Category 3
Skin Corr. 1B	Skin corrosion, Category 1B
Skin Irrit. 2	Skin irritation, Category 2
Skin Sens. 1	Skin sensitization, Category 1
Skin Sens. 1B	Skin sensitization, Category 1B
STOT SE 3	Specific target organ toxicity - single exposure, Category 3

**Abbreviations**

ADR - Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 RID - Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
 IMDG - International Maritime Code for Dangerous Goods  
 IATA - International Air Transport Association  
 IATA-DGR - Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
 ICAO-TI - Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
 GHS - Globally Harmonized System of Classification and Labelling of Chemicals  
 EINECS - European Inventory of Existing Commercial Chemical Substances  
 CAS - Chemical Abstracts Service (division of the American Chemical Society)  
 GefStoffV - Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)

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LOAEL - Lowest Observed Adverse Effect Level  
 LOEL - Lowest Observed Effect Level  
 NOAEL - No Observed Adverse Effect Level  
 NOEC - No Observed Effect Concentration  
 NOEL - No Observed Effect Level  
 OECD - Organisation for Economic Cooperation and Development  
 VOC - Volatile Organic Compounds

Changes since the last version are highlighted in the margin (\*\*\*) . This version replaces all previous versions.

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification.

The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

The information contained herein is based on the present state of our knowledge and does therefore not guarantee certain properties.

## **Annex to the extended Safety Data Sheet (eSDS)**

### **Short title of the exposure scenario**

ES017 - Industrial applications: industrial spraying (inside)

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

Surface treatment of wood and other materials

### **Use**

SU3	Industrial uses: Uses of substances as such or in preparations at industrial sites
ERC4	Industrial use of processing aids in processes and products, not becoming part of articles
ERC5	Industrial use resulting in inclusion into or onto a matrix
PROC7	Industrial spraying

## **Contributing exposure scenario controlling environmental exposure**

### **Use**

ERC4	Industrial use of processing aids in processes and products, not becoming part of articles
------	--

ERC5	Industrial use resulting in inclusion into or onto a matrix
------	---

### **Physical form**

liquid

### **Maximum amount used per time or activity**

Emission days per site: <= 300

### **Other relevant operational conditions**

Use: Room temperature

Drying and through-curing takes place at ambient temperature or at higher temperatures.

Curing takes place through UV light exposure (only with UV light curing systems ).

Where possible recycling is preferred to disposal or incineration.

Do not allow to enter soil, waterways or waste water canal.

Dispose of rinse water in accordance with local and national regulations.

### **Waste water**

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Do not discharge into the drains/surface waters/groundwater. Spray cabin waters are to be conducted after mechanical pretreatment into a wastewater treatment facility.

**Exhaust air**

Keep container closed. Avoid release to the environment.

**Soil**

Floors should be impervious, resistant to liquids and easy to clean.

**Disposal recommendations for the product**

EWC waste code	080111 - waste paint and varnish containing organic solvents or other dangerous substances
	200127 - paint, inks, adhesives and resins containing dangerous substances

Where possible recycling is preferred to disposal or incineration.  
Do not allow to enter drains or waterways.

**modified product**

EWC waste code	080115 - aqueous sludges containing paint or varnish containing organic solvents or other dangerous substances
----------------	--

**Dried residues**

EWC waste code	080112 - waste lacquers and waste paint except those falling under 080111
----------------	---

**Disposal recommendations for packaging**

EWC waste code	150110 - packaging containing residues of or contaminated by dangerous substances
----------------	---

Completely emptied packagings can be given for recycling.

**Contributing exposure scenario controlling worker exposure**

**Use**

SU3	Industrial uses: Uses of substances as such or in preparations at industrial sites
PROC7	Industrial spraying

**Physical form**

liquid

**Maximum amount used per time or activity**

Duration of exposure	<=	8	h/d
Frequency of exposure	<=	220	d/a

**Other relevant operational conditions**

Use: Room temperature  
Drying and through-curing takes place at ambient temperature or at higher temperatures.  
Curing takes place through UV light exposure (only with UV light curing systems ).  
Read attached instructions before use.

**Product substance and product safety related measures**

Mainly used in closed systems. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Provide for sufficient ventilation. This can be achieved by local exhaust or general exhaust air collection. Wear a suitable respirator if the ventilation is not sufficient to keep the solvent vapour concentration below the occupational limit values.

**Respiratory protection**

Avoid inhalation of vapour and spray mist. Use breathing apparatus if exposed to vapours/dust/aerosol.  
Recommended Filter type: Respiratory protection mask with combination filter A/P2

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### Hand protection

Protective gloves complying with EN 374.

Glove material

Appropriate Material butyl-rubber

Material thickness  $\geq$  0,5

Breakthrough time  $\geq$  120

This recommendation is valid only for the product named in this safety data sheet supplied by us, and only for the indicated intended use purposes.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

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

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

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.

### Eye protection

Wear eye glasses with side protection according to EN 166.

### Body protection

Wear suitable protective clothing. Remove contaminated clothing and wash it before reuse. Wash hands before breaks and after work.

### Exposure estimation and reference to its source

#### Workers (industrial)

SU	SU3
PROC	PROC7
Assessment method	inhalation, long-term - systemic
Exposure assessment	42 mg/m <sup>3</sup>
Exposure assessment (method)	ESIG GES tool
Risk characterisation ratio (RCR)	0,428571
Lead substance	2-butoxyethanol

#### Workers (industrial)

PROC	PROC7
Assessment method	dermal, long-term - systemic
Exposure assessment	8,5714 mg/kg/d
Exposure assessment (method)	ESIG GES tool
Risk characterisation ratio (RCR)	0,068571
Lead substance	2-butoxyethanol

#### Workers (industrial)

PROC	PROC10
Assessment method	inhalation, long-term - systemic
Exposure assessment	55 mg/m <sup>3</sup>
Exposure assessment (method)	EASY TRA v3.5
Risk characterisation ratio (RCR)	0,561224
Lead substance	2-butoxyethanol

#### Workers (industrial)

PROC	PROC10
Assessment method	dermal, long-term - systemic
Exposure assessment	5,4857 mg/kg/d
Exposure assessment (method)	ESIG GES tool

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Risk characterisation ratio (RCR) 0,043886  
Lead substance 2-butoxyethanol

**Workers (industrial)**

PROC PROC13  
Assessment method inhalation, long-term - systemic  
Exposure assessment 49,2393 mg/m<sup>3</sup>  
Exposure assessment (method) ESIG GES tool  
Risk characterisation ratio (RCR) 0,502441  
Lead substance 2-butoxyethanol

**Workers (industrial)**

PROC PROC13  
Assessment method dermal, long-term - systemic  
Exposure assessment 2,7429 mg/kg/d  
Exposure assessment (method) EASY TRA v3.5  
Risk characterisation ratio (RCR) 0,021943  
Lead substance 2-butoxyethanol

**Workers (industrial)**

SU SU3  
PROC PROC7  
Assessment method inhalation, long-term - local and systemic  
Exposure assessment 7 ppm  
Risk characterisation ratio (RCR) 0,7  
Lead substance 2-(2-butoxyethoxy)ethanol

**Workers (industrial)**

SU SU3  
PROC PROC7  
Assessment method dermal, long-term - systemic  
Exposure assessment 2,14 mg/kg/d  
Risk characterisation ratio (RCR) 0,11  
Lead substance 2-(2-butoxyethoxy)ethanol

**Workers (industrial)**

SU SU3  
PROC PROC10  
Assessment method inhalation, long-term - local and systemic  
Exposure assessment 0,5 ppm  
Risk characterisation ratio (RCR) 0,05  
Lead substance 2-(2-butoxyethoxy)ethanol

**Workers (industrial)**

SU SU3  
PROC PROC10  
Assessment method dermal, long-term - systemic  
Exposure assessment 5,49 mg/kg/d  
Risk characterisation ratio (RCR) 0,27  
Lead substance 2-(2-butoxyethoxy)ethanol

**Workers (industrial)**

SU SU3  
PROC PROC13  
Assessment method inhalation, long-term - local and systemic  
Exposure assessment 2 ppm  
Risk characterisation ratio (RCR) 0,2



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Lead substance	2-(2-butoxyethoxy)ethanol
<b>Workers (industrial)</b>	
SU	SU3
PROC	PROC13
Assessment method	dermal, long-term - systemic
Exposure assessment	0,69 mg/kg/d
Risk characterisation ratio (RCR)	0,034
Lead substance	2-(2-butoxyethoxy)ethanol

## **Information on estimated exposure and downstream-user guidance**

### **Guidance for Downstream Users**

The downstream user can evaluate whether he operates within the conditions set in the exposure scenario on the basis of the information supplied. This evaluation can be conducted by an expert or using the risk assessment tools recommended by ECHA.

## **Annex to the extended Safety Data Sheet (eSDS)**

### **Short title of the exposure scenario**

ES019 - Professional uses: Non industrial spraying (inside)

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

Surface treatment of wood and other materials

### **Use**

SU22	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
ERC8a	Wide dispersive indoor use of processing aids in open systems
ERC8c	Wide dispersive indoor use resulting in inclusion into or onto a matrix
PROC11	Non industrial spraying

## **Contributing exposure scenario controlling environmental exposure**

### **Use**

ERC8a	Wide dispersive indoor use of processing aids in open systems
ERC8c	Wide dispersive indoor use resulting in inclusion into or onto a matrix

### **Physical form**

liquid

### **Maximum amount used per time or activity**

Emission days per site: <= 250

### **Other relevant operational conditions**

Use: Room temperature  
Drying and through-curing takes place at ambient temperature or at higher temperatures.  
Curing takes place through UV light exposure (only with UV light curing systems ).  
Where possible recycling is preferred to disposal or incineration.  
Do not allow to enter soil, waterways or waste water canal.  
Dispose of rinse water in accordance with local and national regulations.

### **Waste water**

Do not discharge into the drains/surface waters/groundwater.

### **Exhaust air**

Keep container closed. Avoid release to the environment.

### **Soil**

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Floors should be impervious, resistant to liquids and easy to clean.

**Disposal recommendations for the product**

EWC waste code 080111 - waste paint and varnish containing organic solvents or other dangerous substances  
200127 - paint, inks, adhesives and resins containing dangerous substances

Where possible recycling is preferred to disposal or incineration.

Do not allow to enter drains or waterways.

**modified product**

EWC waste code 080115 - aqueous sludges containing paint or varnish containing organic solvents or other dangerous substances

**Dried residues**

EWC waste code 080112 - waste lacquers and waste paint except those falling under 080111

**Disposal recommendations for packaging**

EWC waste code 150110 - packaging containing residues of or contaminated by dangerous substances

Completely emptied packagings can be given for recycling.

**Contributing exposure scenario controlling worker exposure (professional)****Short title of the exposure scenario**

Substance number:CES038

**Use**

SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

PROC11 Non industrial spraying

**Physical form**

liquid

**Maximum amount used per time or activity**

Duration of exposure <= 8 h/d

Frequency of exposure <= 220 d/a

**Other relevant operational conditions**

Use: Room temperature

Drying and through-curing takes place at ambient temperature or at higher temperatures.

Curing takes place through UV light exposure (only with UV light curing systems ).

Read attached instructions before use.

**Product substance and product safety related measures**

Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Provide for sufficient ventilation. This can be achieved by local exhaust or general exhaust air collection. Wear a suitable respirator if the ventilation is not sufficient to keep the solvent vapour concentration below the occupational limit values.

**Respiratory protection**

Avoid inhalation of vapour and spray mist. Use breathing apparatus if exposed to vapours/dust/aerosol.

Recommended Filter type: Respiratory protection mask with combination filter A/P2

**Hand protection**

Protective gloves complying with EN 374.

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Glove material  
 Appropriate Material butyl-rubber  
 Material thickness >= 0,5  
 Breakthrough time >= 120

This recommendation is valid only for the product named in this safety data sheet supplied by us, and only for the indicated intended use purposes.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

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

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

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.

### Eye protection

Wear eye glasses with side protection according to EN 166.

### Body protection

Wear suitable protective clothing. Remove contaminated clothing and wash it before reuse. Wash hands before breaks and after work.

## Exposure estimation and reference to its source

### Workers (professional)

SU	SU22
PROC	PROC10
Assessment method	inhalation, long-term - systemic
	Indoor use
Exposure assessment	36,9294 mg/m <sup>3</sup>
Exposure assessment (method)	ESIG GES tool
Risk characterisation ratio (RCR)	0,376831
Lead substance	2-butoxyethanol

### Workers (professional)

SU	SU22
PROC	PROC10
Assessment method	dermal, long-term - systemic
	Indoor use
Exposure assessment	5,4857 mg/kg/d
Exposure assessment (method)	ESIG GES tool
Risk characterisation ratio (RCR)	0,043887
Lead substance	2-butoxyethanol

### Workers (professional)

SU	SU22
PROC	PROC10
Assessment method	inhalation, long-term - systemic
	Outdoor use
Exposure assessment	51,7012 ppm
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,527563
Lead substance	2-butoxyethanol

### Workers (professional)

SU	SU22
PROC	PROC10

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Assessment method	dermal, long-term - systemic Outdoor use
Exposure assessment	3,2914 mg/kg/d
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,026331
Lead substance	2-butoxyethanol
<b>Workers (professional)</b>	
SU	SU22
PROC	PROC11
Assessment method	inhalation, long-term - systemic Indoor use
Exposure assessment	62 mg/m <sup>3</sup>
Exposure assessment (method)	ESIG GES tool
Risk characterisation ratio (RCR)	0,632653
Lead substance	2-butoxyethanol
<b>Workers (professional)</b>	
SU	SU22
PROC	PROC11
Assessment method	dermal, long-term - systemic Indoor use
Exposure assessment	12,8571 mg/kg/d
Exposure assessment (method)	ESIG GES tool
Risk characterisation ratio (RCR)	0,632653
Lead substance	2-butoxyethanol
<b>Workers (professional)</b>	
SU	SU22
PROC	PROC11
Assessment method	inhalation, long-term - systemic Outdoor use
Exposure assessment	10 ppm
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,5
Lead substance	2-butoxyethanol
<b>Workers (professional)</b>	
SU	SU22
PROC	PROC11
Assessment method	dermal, long-term - systemic Outdoor use
Exposure assessment	21 mg/kg/d
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,286
Lead substance	2-butoxyethanol
<b>Workers (professional)</b>	
SU	SU22
PROC	PROC13
Assessment method	inhalation, long-term - systemic Indoor use
Exposure assessment	49,2393 mg/m <sup>3</sup>
Exposure assessment (method)	ESIG GES tool
Risk characterisation ratio (RCR)	0,502441
Lead substance	2-butoxyethanol

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**Workers (professional)**

SU	SU22
PROC	PROC13
Assessment method	dermal, long-term - systemic
	Indoor use
Exposure assessment	2,7429 mg/kg/d
Exposure assessment (method)	ESIG GES tool
Risk characterisation ratio (RCR)	0,021943
Lead substance	2-butoxyethanol

**Workers (professional)**

SU	SU22
PROC	PROC13
Assessment method	inhalation, long-term - systemic
	Outdoor use
Exposure assessment	7 ppm
Exposure assessment (method)	ESIG GES tool
Risk characterisation ratio (RCR)	0,35
Lead substance	2-butoxyethanol

**Workers (professional)**

SU	SU22
PROC	PROC13
Assessment method	dermal, long-term - systemic
	Outdoor use
Exposure assessment	14 mg/kg/d
Exposure assessment (method)	ESIG GES tool
Risk characterisation ratio (RCR)	0,183
Lead substance	2-butoxyethanol

**Workers (professional)**

SU	SU22
PROC	PROC10
Assessment method	inhalation, long-term - local and systemic
	Outdoor use
Exposure assessment	2,5 ppm
Risk characterisation ratio (RCR)	0,25
Lead substance	2-(2-butoxyethoxy)ethanol

**Workers (professional)**

SU	SU22
PROC	PROC10
Assessment method	dermal, long-term - systemic
	Outdoor use
Exposure assessment	2,74 mg/kg/d
Risk characterisation ratio (RCR)	0,137
Lead substance	2-(2-butoxyethoxy)ethanol

**Workers (professional)**

SU	SU22
PROC	PROC10
Assessment method	inhalation, long-term - local and systemic
	Indoor use
Exposure assessment	1,25 ppm
Risk characterisation ratio (RCR)	0,125
Lead substance	2-(2-butoxyethoxy)ethanol

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**Workers (professional)**

SU	SU22
PROC	PROC10
Assessment method	dermal, long-term - systemic
	Indoor use
Exposure assessment	0,55 mg/kg/d
Risk characterisation ratio (RCR)	0,027
Lead substance	2-(2-butoxyethoxy)ethanol

**Workers (professional)**

SU	SU22
PROC	PROC11
Assessment method	inhalation, long-term - local and systemic
	Indoor use
Exposure assessment	5 ppm
Risk characterisation ratio (RCR)	0,5
Lead substance	2-(2-butoxyethoxy)ethanol

**Workers (professional)**

SU	SU22
PROC	PROC11
Assessment method	dermal, long-term - systemic
	Indoor use
Exposure assessment	2,14 mg/kg/d
Risk characterisation ratio (RCR)	0,107
Lead substance	2-(2-butoxyethoxy)ethanol

**Workers (professional)**

SU	SU22
PROC	PROC11
Assessment method	inhalation, long-term - local and systemic
	Outdoor use
Exposure assessment	4,2 ppm
Risk characterisation ratio (RCR)	0,42
Lead substance	2-(2-butoxyethoxy)ethanol

**Workers (professional)**

SU	SU22
PROC	PROC11
Assessment method	dermal, long-term - systemic
	Outdoor use
Exposure assessment	1,29 mg/kg/d
Risk characterisation ratio (RCR)	0,42
Lead substance	2-(2-butoxyethoxy)ethanol

**Workers (professional)**

SU	SU22
PROC	PROC13
Assessment method	inhalation, long-term - local and systemic
	Indoor use
Exposure assessment	2 ppm
Risk characterisation ratio (RCR)	0,2
Lead substance	2-(2-butoxyethoxy)ethanol

**Workers (professional)**

SU	SU22
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PROC	PROC13
Assessment method	dermal, long-term - systemic
	Indoor use
Exposure assessment	0,69 mg/kg/d
Risk characterisation ratio (RCR)	0,034
Lead substance	2-(2-butoxyethoxy)ethanol
<b>Workers (professional)</b>	
SU	SU22
PROC	PROC13
Assessment method	inhalation, long-term - local and systemic
	Outdoor use
Exposure assessment	4,2 ppm
Risk characterisation ratio (RCR)	0,42
Lead substance	2-(2-butoxyethoxy)ethanol
<b>Workers (professional)</b>	
SU	SU22
PROC	PROC13
Assessment method	dermal, long-term - systemic
	Outdoor use
Exposure assessment	0,41 mg/kg/d
Risk characterisation ratio (RCR)	0,42
Lead substance	2-(2-butoxyethoxy)ethanol

## **Information on estimated exposure and downstream-user guidance**

### **Guidance for Downstream Users**

The downstream user can evaluate whether he operates within the conditions set in the exposure scenario on the basis of the information supplied. This evaluation can be conducted by an expert or using the risk assessment tools recommended by ECHA.