

Trade name: Hesse HYDRO Metallic lacquer HB 65445-9007

Version: 16 / GB

Revision: 30.07.2021

Replaces Version: 15 / 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 65445-9007

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

	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	<	4	%
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		

propan-2-ol

CAS No.	67-63-0			
EINECS no.	200-661-7			
Registration no.	01-2119457558-25			
Concentration	>= 1	<	3	%
Classification (Regulation (EC) No. 1272/2008)				
	Flam. Liq. 2	H225		
	Eye Irrit. 2	H319		
	STOT SE 3	H336		Nervous system

2-(2-butoxyethoxy)ethanol

CAS No.	112-34-5			
EINECS no.	203-961-6			
Registration no.	01-2119475104-44			
Concentration	>= 1	<	2	%
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

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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

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

CAS No. 126-86-3

EINECS no. 204-809-1

Registration no. 01-2119954390-39

Concentration >= 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 >= 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	>= 0,6 %
Skin Irrit. 2	H315	>= 0,06 %
Eye Irrit. 2	H319	>= 0,06 %

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Skin Sens. 1	H317	>= 0,0015 %
Eye Dam. 1	H318	>= 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
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

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Recommended: alcohol resistant foam, CO₂, 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**

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

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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

List	Directive 2017/164 EG			
Value	98	mg/m ³	20	ppm(V)
Short term exposure limit	246	mg/m ³	50	ppm(V)
Skin resorption / sensibilisation: H; Status: 12/2009				

2-butoxyethanol

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

propan-2-ol

List	EH40			
Value	999	mg/m ³	400	ppm(V)
Short term exposure limit	1250	mg/m ³	500	ppm(V)
Status: 01/2020				

2-(2-butoxyethoxy)ethanol

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

2-(2-butoxyethoxy)ethanol

List	Directive 2017/164 EG			
Value	67,5	mg/m ³	10	ppm(V)
Short term exposure limit	101,2	mg/m ³	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		

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Concentration	246	mg/m ³
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
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 ³
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 ³
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)	

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Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	123	mg/m ³
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	
Mode of action	Acute effects	
Concentration	426	mg/m ³
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 ³
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 ³
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 ³

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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 ³

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	147	mg/m ³

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)	

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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 ³
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	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 ³
propan-2-ol		
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	Chronic effects	
Concentration	888	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	Chronic effects	

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Concentration 500 mg/m³

Type of value Derived No Effect Level (DNEL)

Reference group Consumer

Duration of exposure Long-term

Route of exposure inhalative

Mode of action Chronic effects

Concentration 89 mg/m³

Type of value Derived No Effect Level (DNEL)

Reference group Consumer

Duration of exposure Long-term

Route of exposure Oral exposure

Mode of action Chronic effects

Concentration 26 mg/kg/d

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 319 mg/kg/d

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/m³

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/m³

Predicted No Effect Concentration (PNEC)

2-butoxyethanol

Type of value PNEC

Type Freshwater

Concentration 8,8 mg/l

Type of value PNEC

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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

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	
Conditions	sporadic release	
Concentration	140,9	mg/l

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Type of value	PNEC		
Type	Fresh water sediment		
Concentration	552		mg/kg
Type of value	PNEC		
Type	saltwater sediment		
Concentration	552		mg/kg
Type of value	PNEC		
Type	Soil		
Concentration	28		mg/kg
Type of value	PNEC		
Type	Sewage treatment plant (STP)		
Concentration	2251		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
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

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Protective gloves complying with EN 374.

Glove material

Appropriate Material butyl-rubber

Material thickness \geq 0,5 mmBreakthrough 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****Form** liquid**Colour** silver colours**Odour** characteristic**Odour threshold**

Remarks not determined

pH value

Value 7,7

Concentration/H₂O 100**Melting point**

Remarks not determined

Freezing point

Remarks not determined

Initial boiling point and boiling range

Remarks not determined

Flash pointValue $>$ 60 °C**Flammability (solid, gas)**

not determined

Upper/lower flammability or explosive limits

Remarks not determined

Vapour pressure

Remarks not determined

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Vapour density

Remarks not determined

DensityValue appr. 1,055 kg/l
Temperature 20 °C**Solubility in water**

Remarks not determined

Solubility(ies)

Remarks not determined

Partition coefficient: n-octanol/water

Remarks not determined

Ignition temperature

Remarks not determined

Decomposition temperature

Remarks not determined

Viscosity

Remarks not determined

Efflux time

Method not applicable

Explosive properties

evaluation not determined

Oxidising properties

Remarks not determined

9.2. Other information**Non-volatile content**Value 28,8 %
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

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Carbon monoxide and carbon dioxide, nitrous oxides (NO_x), 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)

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)		

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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
 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.

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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)		

propan-2-ol

Species	rabbit		
Observation Period	14	d	
evaluation	Irritating to eyes.		
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.		
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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 [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.
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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.

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Repeated exposure

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

Specific Target Organ Toxicity (STOT) (Components)**propan-2-ol****Specific target organ toxicity - single exposure**
 Remarks
 Organs: Nervous system
 Possible narcotic effects (drowsiness, dizziness).
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
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

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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**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

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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

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
14.1. UN number	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

VOC (EU) 7 % 73 g/l

16. Other information

Hazard statements listed in Chapter 3

H225 Highly flammable liquid and vapour.
 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.

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H330	Fatal if inhaled.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
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. 2	Flammable liquid, 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)
 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

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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

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.

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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
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Disposal recommendations for packaging

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

Hand protection

Protective gloves complying with EN 374.

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.

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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 ³
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 ³
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
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 ³
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

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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
Lead substance	2-(2-butoxyethoxy)ethanol
Workers (industrial)	
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

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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

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
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Dried residues

EWC waste code	080112 - waste lacquers and waste paint except those
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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.

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.

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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 ³
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
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

Workers (professional)

SU	SU22
PROC	PROC11
Assessment method	inhalation, long-term - systemic
	Indoor use
Exposure assessment	62 mg/m ³
Exposure assessment (method)	ESIG GES tool

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Risk characterisation ratio (RCR) 0,632653
Lead substance 2-butoxyethanol

Workers (professional)

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

Workers (professional)

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

Workers (professional)

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

Workers (professional)

SU SU22
PROC PROC13
Assessment method inhalation, long-term - systemic
Indoor use

Exposure assessment 49,2393 mg/m³
Exposure assessment (method) ESIG GES tool
Risk characterisation ratio (RCR) 0,502441
Lead substance 2-butoxyethanol

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

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Exposure assessment	Outdoor use
Exposure assessment (method)	7 ppm
Risk characterisation ratio (RCR)	ESIG GES tool
Lead substance	0,35
	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
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

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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
 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

Workers (professional)

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

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Workers (professional)

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.