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

1.1. Product identifier

glimtrex SIGNUM 2-Pack Lacquer satin 103002

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 2003
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
PROC10	Roller application or brushing

	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 3003
SU21	Consumer uses: Private households (= general public = consumers)
ERC8a	Wide dispersive indoor use of processing aids in open systems
ERC8c	Wide dispersive indoor use resulting in inclusion into or onto a matrix
PROC10	Roller application or brushing

1.3. Details of the supplier of the safety data sheet

Manufacturer

glimtrex GmbH
Orkotten 68
48291 Telgte

Telephone no.	+49 (0) 2504 88887-111
Fax no.	+49 (0) 2504 88887-112
E-mail address	info@glimtrex.de

1.4. Emergency telephone number

Germany: +49 (0) 30 30686700

SECTION 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.

Supplemental information

EUH210 Safety data sheet available on request.

2.3. Other hazards

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

SECTION 3: Composition/information on ingredients

Hazardous ingredients

2-butoxyethanol

CAS No.	111-76-2				
EINECS no.	203-905-0				
Registration no.	01-2119475108-36				
Concentration	>= 1	< 6	%		
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			
ATE	Oral exposure	1.200	mg/kg		
ATE	Dermal exposure	435	mg/kg		
ATE	Inhalation exposure, Dust/Mist	2,56	mg/l		

2-(2-butoxyethoxy)ethanol

CAS No.	112-34-5				
EINECS no.	203-961-6				
Registration no.	01-2119475104-44				
Concentration	>= 1	< 3	%		
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

ATE	Inhalation exposure, Dust/Mist	0,5	mg/l

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			
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 %
Skin Sens. 1	H317	>= 0,0015 %
Eye Dam. 1	H318	>= 0,6 %
Aquatic Chronic 1	H410	M = 100
Aquatic Acute 1	H400	M = 100

Note

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In all cases of doubt, or when symptoms persist, seek medical attention. If unconscious place in recovery position and seek medical advice. First aider: Pay attention to self-protection! Remove affected person from danger area, lay him down.

After inhalation

In case of accident by inhalation: remove casualty to fresh air and keep at rest. Keep warm, calm and covered up. In all cases of doubt, or when symptoms persist, seek medical attention.

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. High concentration of vapours may cause irritation to eyes and respiratory system and produce narcotic effects.

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

Hints for the physician / treatment

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

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. Vapours can form an explosive mixture with air.

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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Eliminate all ignition sources if safe to do so. Ensure adequate ventilation. 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.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits. Keep container tightly closed and dry in a cool, well-ventilated place. Use only with adequate ventilation/personal protection. Ensure adequate ventilation. 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. Avoid contact with skin and eyes. Avoid inhalation of vapour and spray mist. Do no 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

Vapours can form an explosive mixture with air. Vapours are heavier than air and may spread along floors. In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Mixture may charge electrostatically: always use earthing leads when transferring from one container to another. Take measures to prevent the build up of electrostatic charge. Wear shoes with conductive soles. No sparking tools should be used. Fight fire with normal precautions from a reasonable distance.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Provide solvent-resistant and impermeable floor. 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.

7.3. Specific end use(s)

See exposure scenario, if available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limit values

2-butoxyethanol

List	TRGS 900			
Value	49	mg/m³	10	ppm(V)

Maximum limit value: 2(I); Skin resorption / sensibilisation: H: Y; Status: 06/2022

2-butoxyethanol

List	Directive 2017/164 EG			
Value	98	mg/m³	20	ppm(V)
Short term exposure limit	246	mg/m³	50	ppm(V)

Skin resorption / sensibilisation: H; Status: 12/2009

2-(2-butoxyethoxy)ethanol

List	TRGS 900			
Value	67	mg/m³	10	ppm(V)

Maximum limit value: 1,5(I); Pregnancy group: Y; Status: 06/2022

2-(2-butoxyethoxy)ethanol

List	Directive 2017/164 EG			
Value	67,5	mg/m³	10	ppm(V)
Short term exposure limit	101,2	mg/m³	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/m³
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/m³
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/m³
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/m³

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/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	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/m³

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/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	49	mg/m³

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/m³

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/m³

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/m³

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/m³

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	0,25	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	1,76	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	0,43 mg/m³

Type of value	Derived No Effect Level (DNEL)
Reference group	Workers (industrial)
Duration of exposure	Short-term
Route of exposure	inhalative
Mode of action	Systemic effects
Concentration	5,28 mg/m³

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	13,53 mg/m³

Type of value	Derived No Effect Level (DNEL)
Reference group	Workers (industrial)
Duration of exposure	Short-term
Route of exposure	Dermal exposure
Mode of action	Systemic effects
Concentration	1,2 mg/kg

Type of value	Derived No Effect Level (DNEL)
Reference group	Workers (industrial)
Duration of exposure	Short-term
Route of exposure	Dermal exposure
Mode of action	Local effects
Concentration	0,1 mg/cm²

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	0,126 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)

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	0,02 mg/m³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	0,09	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	0,02	mg/m³

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	0,04	mg/m³

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	0,11	mg/kg/d

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	0,04	mg/m³

Predicted No Effect Concentration (PNEC)

2-butoxyethanol

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

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	0,066	mg/l
Type of value	PNEC	
Type	Saltwater	
Concentration	0,004	mg/l
Type of value	PNEC	
Conditions	sporadic release	
Concentration	0,0661	mg/l
Type of value	PNEC	
Type	Fresh water sediment	
Concentration	0,246	mg/kg
Type of value	PNEC	
Type	Soil	
Concentration	0,01	mg/kg
Type of value	PNEC	

Type	Sewage treatment plant (STP)	
Concentration	10	mg/l
Type of value	PNEC	
Type	saltwater sediment	
Concentration	0,015	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)

Type of value	PNEC	
Type	Marine	
Concentration	3,39	µg/l
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	0,23	mg/l
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	0,027	mg/kg
Type of value	PNEC	
Type	Marine sediment	
Concentration	0,027	mg/kg
Type of value	PNEC	
Type	Soil	
Concentration	0,01	mg/kg
Type of value	PNEC	
Type	Freshwater	
Concentration	3,39	µg/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	>=	0,7	mm
Breakthrough time	>=	30	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.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	liquid
Colour	white
Odour	characteristic

Melting point

Remarks	not determined

Freezing point

Remarks	not determined

Boiling point or initial boiling point and boiling range

Value	100	to	197,6	°C

Flammability

not determined

Upper and lower explosive limits

Remarks	not determined

Flash point

Value	>	60	°C

Ignition temperature

Remarks	not determined

Decomposition temperature

Remarks	not determined

pH value

Value	8
Concentration/H2O	100

Viscosity

Remarks	not determined

Solubility(ies)

Remarks	not determined

Partition coefficient n-octanol/water (log value)

Remarks	not determined

Vapour pressure

Remarks	not determined

Density and/or relative density

Value	appr. 1,044		kg/l
Temperature	20	°C	

Relative vapour density

Remarks	not determined

Particle characteristics

Remarks	not determined

9.2. Other information

Odour threshold

Remarks	not determined

Evaporation rate

Remarks	not determined

Solubility in water

Remarks	not determined

Efflux time

Value	40	to	60	s
Temperature	20	°C		
Method	DIN EN ISO 2431 - 4 mm			

Explosive properties

evaluation	not determined

Oxidising properties

Remarks	not determined

Non-volatile content

Value	35,6	%
Method	calculated value	

Other information

This information is not available.

SECTION 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 (NOx), dense black smoke, No decomposition if used as prescribed.

SECTION 11: Toxicological information

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

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

ATE	1200	mg/kg

2-dimethylaminoethanol

Species	rat	
LD50	1183	mg/kg
Method	OECD 401	

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	53	mg/kg

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

Species	rat	
LD50	1193	mg/kg

Acute dermal toxicity

ATE	8.503,98	mg/kg
	32	
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)		

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

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

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

evaluation	Irritating to skin.

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

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

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

evaluation	Irritating to eyes.

Sensitization

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

Sensitization (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	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.

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

Reference substance	1,2-benzisothiazol-3(2H)-one
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.

11.2 Information on other hazards

Endocrine disrupting properties with respect to humans

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

Other information

No toxicological data are available.

SECTION 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)

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	

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

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

Daphnia 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	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	

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

Species	Daphnia magna (Water flea)		
EC50	2,94		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)

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.

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

evaluation 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 (log value)

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.

Results of PBT and vPvB assessment

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

12.6 Endocrine disrupting properties

Endocrine disrupting properties with respect to the envrionment

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

12.7. Other adverse effects

General information

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

General information / ecology

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

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations for the product

EWC waste code 140603 - other solvents and solvent mixtures
EWC waste code 200113 - solvents
Where possible recycling is preferred to disposal or incineration.
Do not allow to enter drains or waterways.

modified product

EWC waste code 070304 - other organic solvents, washing liquids and mother liquors

Disposal recommendations for packaging

EWC waste code 150110 - packaging containing residues of or contaminated by dangerous substances
Germany: KBS system for sheet covering
Completely emptied packagings can be given for recycling.

SECTION 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.

SECTION 15: Regulatory information

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

Water Hazard Class (Germany)

Water Hazard Class (Germany) WGK 1
Remarks Derivation of WGK according to Annex 1 No. 5.2 AwSV

VOC

VOC (EU) 7,2 % 75 g/l

15.2. Chemical safety assessment

For this substance / mixture a chemical safety assessment was not carried out.

SECTION 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 theInternational 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 Econpmic 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

ES005 - 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.
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 140603 - other solvents and solvent mixtures
200113 - solvents

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

modified product

EWC waste code	070304 - other organic solvents, washing liquids and mother liquors

Disposal recommendations for packaging

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

Germany: KBS system for sheet covering
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.
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	>=	0,7
Breakthrough time	>=	30

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/m³
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/m³
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/m³
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
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 using the risk assessment tools recommended by ECHA.

Annex to the extended Safety Data Sheet (eSDS)

Short title of the exposure scenario

ES008 - Professional uses: roller application or brushing, dipping and pouring and other processing without aerosol formation (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
PROCh01	Other processing without aerosol formation
PROC10	Roller application or brushing
PROC13	Treatment of articles by dipping and pouring

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.
Volatile organic substances will volatilise into the atmospheric air inside.
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 140603 - other solvents and solvent mixtures
200113 - solvents

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

modified product

EWC waste code 070304 - other organic solvents, washing liquids and mother liquors

Disposal recommendations for packaging

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

Germany: KBS system for sheet covering
Completely emptied packagings can be given for recycling.

Contributing exposure scenario controlling worker exposure (professional)

Short title of the exposure scenario

Substance number:CES016

Use

SU22	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
PROCh01	Other processing without aerosol formation
PROC10	Roller application or brushing
PROC13	Treatment of articles by dipping and pouring

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.
Volatile organic substances will volatilise into the atmospheric air inside.
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	>=	0,7
Breakthrough time	>=	30

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/m³
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/m³
Exposure assessment (method)	ESIG GES tool
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
	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
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
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

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.

Annex to the extended Safety Data Sheet (eSDS)

Short title of the exposure scenario

ES010 - Private households (= general public = consumers): roller application or brushing, dipping and pouring, non industrial spraying and other processing without aerosol formation (inside)

Use of the substance/preparation

Surface treatment of wood and other materials

Use

SU21	Consumer uses: Private households (= general public = consumers)
ERC8a	Wide dispersive indoor use of processing aids in open systems
ERC8c	Wide dispersive indoor use resulting in inclusion into or onto a matrix
PROCh01	Other processing without aerosol formation
PROC10	Roller application or brushing
PROC11	Non industrial spraying
PROC13	Treatment of articles by dipping and pouring

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: <= 20

Other relevant operational conditions

Use: Room temperature
Adhere to the recommended processing temperature.
Volatile organic substances will volatilise into the atmospheric air inside.
Do not allow to enter soil, waterways or waste water canal.

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. Protect floor with suitable covering plastic film / paper.

Disposal recommendations for the product

EWC waste code	140603 - other solvents and solvent mixtures 200113 - solvents

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

modified product

EWC waste code	070304 - other organic solvents, washing liquids and mother liquors

Disposal recommendations for packaging

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

Germany: KBS system for sheet covering
Completely emptied packagings can be given for recycling.

Contributing exposure scenario controlling consumer exposure

Use

SU21	Consumer uses: Private households (= general public = consumers)
PROCh01	Other processing without aerosol formation
PROC10	Roller application or brushing
PROC11	Non industrial spraying
PROC13	Treatment of articles by dipping and pouring

Physical form liquid

Maximum amount used per time or activity

Duration of exposure	<=	4	h/d
Frequency of exposure	<=	20	d/a

Other relevant operational conditions

Use: Room temperature
Drying and through-curing takes place at ambient temperature or at higher temperatures.
Adhere to the recommended processing temperature.
Volatile organic substances will volatilise into the atmospheric air inside.

Product substance and product safety related measures

Keep out of reach of children. Keep away from food, drink and animal feedingstuffs. Do no eat, drink or smoke when using this product.
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
Protective gloves complying with EN 374.
Glove material

Appropriate Material	butyl-rubber	
Material thickness	>=	0,7
Breakthrough time	>=	30

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.
Wear eye glasses with side protection according to EN 166.
Wear suitable protective clothing. Remove contaminated clothing and wash it before reuse. Wash hands before breaks and after work.

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.