

# Safety Data Sheet

## according to Regulation (EC) No. 1907/2006 (REACH)



**Trade name :** Lignodur FlexGuard 871 - Protect-Qualität  
Topcoat 871 - Protect Quality  
**Revision date :** 20.04.2022  
**Print date :** 20.04.2022

**Version (Revision) :** 22.0.1 (22.0.0)

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

#### 1.1 Product identifier

Lignodur FlexGuard 871 - Protect-Qualität  
Topcoat 871 - Protect Quality

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

##### Relevant identified uses

###### Products Category [PC]

PC 9 - Coatings and paints, fillers, putties, thinners.

##### Uses advised against

There are no information about relevant identified uses of the product according to the Regulation (EC) No. 1907/2006 (REACH-Regulation), which are advised against. For using the product observe the information in the Technical data sheet of the product.

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

##### Supplier

Brillux GmbH & Co KG  
www.brillux.de

**Street :** Weseler Straße 401

**Postal code/City :** D - 48163 Münster

**Telephone :** +49 (0)251-7188-0

**Telefax :** +49 (0)251-7188-280

##### Information contact :

Electronic mail address of the well-informed person for safety data sheets:sdb@brillux.de

#### 1.4 Emergency telephone number

Outside the business hours (9 a.m. to 5 p.m.):  
(Giftinformationszentrum-Nord, Göttingen, consultation in german or english language)  
Telephone: +49 (0)551-19240.

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification according to Regulation (EC) No 1272/2008 [CLP]

Skin Sens. 1 ; H317 - Skin sensitisation : Category 1 ; May cause an allergic skin reaction.

Aquatic Chronic 3 ; H412 - Hazardous to the aquatic environment : Chronic 3 ; Harmful to aquatic life with long lasting effects.

#### 2.2 Label elements

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

###### Hazard pictograms



Exclamation mark (GHS07)

##### Signal word

Warning

##### Hazard components for labelling

TERBUTRYN ; CAS No. : 886-50-0

1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5

# Safety Data Sheet

## according to Regulation (EC) No. 1907/2006 (REACH)



**Trade name :** Lignodur FlexGuard 871 - Protect-Qualität  
Topcoat 871 - Protect Quality  
**Revision date :** 20.04.2022  
**Print date :** 20.04.2022

**Version (Revision) :** 22.0.1 (22.0.0)

2-OCTYL-2H-ISOTHIAZOL-3-ONE ; CAS No. : 26530-20-1

### Hazard statements

H317 May cause an allergic skin reaction.  
H412 Harmful to aquatic life with long lasting effects.

### Precautionary statements

P102 Keep out of reach of children.  
P261 Avoid breathing spray.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
P501 Dispose of contents/container to approved disposal company or local collection.

### Special rules for supplemental label elements for certain mixtures

EUH211 Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

## 2.3 Other hazards

The product does not contain any substances with endocrine-disrupting properties according to Article 59 Paragraph 1 or substances with endocrine-disrupting properties according to Regulations (EU) 2017/2100 or (EU) 2018/605. The product does not contain any substances, which fulfil the criteria for PBT or vPvB in accordance with the Annex XIII of the Regulation (EC) No 1907/2006 (REACH-Regulation).

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Description

Dispersion paint;

Composition:

Acrylic-copolymer-dispersion, titanium dioxide (depending on the shade), inorganic/organic pigments (depending on the shade), calcium carbonate, silicates, water, glycol ether, additives, preservatives for film protection and preservatives (pyrithione zinc and benzisothiazolinone).

#### Hazardous ingredients

TITANIUM DIOXIDE ; EC No. : 236-675-5; CAS No. : 13463-67-7

Weight fraction :  $\geq 1 - < 25 \%$   
Classification 1272/2008 [CLP] : Carc. 2 ; H351i

2-BUTOXYETHANOL ; REACH No. : 01-2119475108-36 ; EC No. : 203-905-0; CAS No. : 111-76-2

Weight fraction :  $\geq 1 - < 5 \%$   
Classification 1272/2008 [CLP] : Acute Tox. 4 ; H302 Acute Tox. 4 ; H332 Skin Irrit. 2 ; H315 Eye Irrit. 2 ; H319  
Specific Conc. Limits : (ATE - oral : 1200 mg/kg)

ZINC PYRITHIONE ; REACH No. : 01-2119511196-46 ; EC No. : 236-671-3; CAS No. : 13463-41-7

Weight fraction :  $\geq 0,0025 - < 0,025 \%$   
Classification 1272/2008 [CLP] : Acute Tox. 2 ; H330 Acute Tox. 3 ; H301 Repr. 1B ; H360D STOT RE 1 ; H372 Eye Dam. 1 ; H318 Aquatic Acute 1 ; H400 Aquatic Chronic 1 ; H410  
(M Chronic=10) • (M Acute=1000) • (ATE - inhalative (dust, mist) : 0,14 mg/L) • (ATE - oral : 221 mg/kg)

TERBUTRYN ; EC No. : 212-950-5; CAS No. : 886-50-0

Weight fraction :  $\geq 0,0025 - < 0,025 \%$   
Classification 1272/2008 [CLP] : Acute Tox. 4 ; H302 Skin Sens. 1B ; H317 Aquatic Acute 1 ; H400 Aquatic Chronic 1 ; H410  
(M=100)

1,2-BENZISOTHIAZOL-3(2H)-ONE ; REACH No. : 01-2120761540-60 ; EC No. : 220-120-9; CAS No. : 2634-33-5

Weight fraction :  $\geq 0,005 - < 0,05 \%$   
Classification 1272/2008 [CLP] : Acute Tox. 2 ; H330 Eye Dam. 1 ; H318 Acute Tox. 4 ; H302 Skin Irrit. 2 ; H315

# Safety Data Sheet

## according to Regulation (EC) No. 1907/2006 (REACH)



**Trade name :** Lignodur FlexGuard 871 - Protect-Qualität  
Topcoat 871 - Protect Quality  
**Revision date :** 20.04.2022  
**Print date :** 20.04.2022

**Version (Revision) :** 22.0.1 (22.0.0)

Specific Conc. Limits : Skin Sens. 1 ; H317 Aquatic Acute 1 ; H400 Aquatic Chronic 2 ; H411  
Skin Sens. 1 ; H317: C  $\geq$  0,05 % • (M Acute=1)  
2-OCTYL-2H-ISOTHIAZOL-3-ONE ; EC No. : 247-761-7; CAS No. : 26530-20-1  
Weight fraction :  $\geq$  0,0025 - < 0,025 %  
Classification 1272/2008 [CLP] : Acute Tox. 3 ; H301 Acute Tox. 3 ; H311 Acute Tox. 3 ; H331 Skin Corr. 1 ; H314  
Eye Dam. 1 ; H318 Skin Sens. 1A ; H317 Aquatic Acute 1 ; H400 Aquatic Chronic 1  
; H410  
(M=100)

### Additional information

For full text of Hazard- and EU Hazard-statements: 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. Immediately remove all contaminated clothing. If unconscious no administration by mouth, storage in recovery position and seek medical advice. If medical advice is needed, have product container or label at hand.

#### Following inhalation

When symptoms persists, take the casualty into the fresh air and keep warm. Irregular breathing/no breathing: artificial respiration.

#### In case of skin contact

Take off immediately all contaminated clothes. Wash away with soap and water and rinse. Do NOT use solvents or thinners. If skin irritation continues, consult a doctor.

#### After eye contact

Remove contact lenses, keep eyelids open. Rinse open eye immediately with plenty of running water. Seek medical advice if complaint continues.

#### Following ingestion

Drink water in small draught. Keep at rest. Do not induce vomiting. When swallowed immediately consult and show packing or label to physician.

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

Allergic symptoms.

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

No further relevant information available.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

This product is not flammable. In case of a fire extinguish surroundings as indicated.

#### Unsuitable extinguishing media

None known.

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

#### Hazardous combustion products

Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

### 5.3 Advice for firefighters

#### Special protective equipment for firefighters

When extinguishing fires, use breathing apparatus with an independent source of air.

### 5.4 Additional information

# Safety Data Sheet

## according to Regulation (EC) No. 1907/2006 (REACH)



**Trade name :** Lignodur FlexGuard 871 - Protect-Qualität  
Topcoat 871 - Protect Quality  
**Revision date :** 20.04.2022  
**Print date :** 20.04.2022

**Version (Revision) :** 22.0.1 (22.0.0)

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

### SECTION 6: Accidental release measures

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

Refer to protective measures listed in sections 7 and 8. The product produced in combination with water slippery surfaces.

#### 6.2 Environmental precautions

Do not empty into drains. If the product contaminates lakes, rivers or sewages, inform appropriate authorities in accordance with local regulations. Holding polluted washing water back and disposing of duly.

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

##### For 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). Remove residue by rinsing thoroughly with water. Thoroughly clean contaminated objects and floors and observe environmental regulations.

#### 6.4 Reference to other sections

See Section 7 for information on safe handling.

You find information about the safety equipment of persons in the section 8, information about the refuse disposal in section 13.

### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

##### Protective measures

No special measures necessary in the case of regulation storage and handling. Ensure a good ventilation in room and working area. For personal protection see Section 8. Keep out of reach of children. Read label before use.

##### Measures to prevent fire

This product is not flammable. Cool endangered containers with water.

##### Advices on general occupational hygiene

While working do not eat, drink or smoke. Wash hands and face before breaks and after work and take a shower if necessary. Immediately remove all contaminated clothing.

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

##### Requirements for storage rooms and vessels

Keep container tightly in a dry, cool and good ventilated place. Do not store the product in lounge room. Keep only in the original container. Protect against frost. Keep out of the reach of children.

##### Hints on joint storage

Store away from foodstuffs.

**Storage class (TRGS 510) :** 12

##### Further information on storage conditions

Keep container tightly sealed. Store at 5°-35°C. Containers should be kept dry and sealed.

#### 7.3 Specific end use(s)

For using the product observe the information in the Technical data sheet of the product.

##### Industrial sector specific solutions

**GISCODE :** Product code in accordance with GISBAU (hazardous materials information system of the German professional associations of the building and construction industry) for colours and varnishes (GISCODE): BSW50

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

# Safety Data Sheet

## according to Regulation (EC) No. 1907/2006 (REACH)



**Trade name :** Lignodur FlexGuard 871 - Protect-Qualität  
Topcoat 871 - Protect Quality

**Revision date :** 20.04.2022

**Print date :** 20.04.2022

**Version (Revision) :** 22.0.1 (22.0.0)

### Occupational exposure limit values

2-BUTOXYETHANOL ; CAS No. : 111-76-2

Limit value type (country of origin) : TRGS 900 ( D )

Limit value : 10 ppm / 49 mg/m<sup>3</sup>

Peak limitation : 2(II)

Remark : H,Y

Version : 02.07.2021

Limit value type (country of origin) : STEL ( EC )

Limit value : 50 ppm / 246 mg/m<sup>3</sup>

Remark : Skin

Version : 20.06.2019

Limit value type (country of origin) : TWA ( EC )

Limit value : 20 ppm / 98 mg/m<sup>3</sup>

Remark : Skin

Version : 20.06.2019

#### Remark

Taking into account the details mentioned in the TRGS 900 for the supervision of AGW.

### Biological limit values

2-BUTOXYETHANOL ; CAS No. : 111-76-2

Limit value type (country of origin) : TRGS 903 ( D )

Parameter : Butoxyacetic acid (after hydrolysis) / Urine (U) / End of exposure or end of shift ; At long term exposure: after several previous shifts

Limit value : 150 mg/g Creatinine

Version : 04.05.2021

### DNEL-/PNEC-values

#### DNEL/DMEL

2-BUTOXYETHANOL ; CAS No. : 111-76-2

Limit value type : DNEL/DMEL (Industrial)

Exposure route : Dermal

Exposure frequency : Short-term

Limit value : 89 mg/kg

Limit value type : DNEL/DMEL (Industrial)

Exposure route : Inhalation

Exposure frequency : Short-term

Limit value : 663 mg/m<sup>3</sup>

Limit value type : DNEL/DMEL (Industrial)

Exposure route : Dermal

Exposure frequency : Long-term

Limit value : 75 mg/kg

Limit value type : DNEL/DMEL (Industrial)

Exposure route : Inhalation

Exposure frequency : Long-term

Limit value : 98 mg/m<sup>3</sup>

1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5

Limit value type : DNEL Consumer (systemic)

Exposure route : Inhalation

Exposure frequency : Long-term

Limit value : 1,2 mg/m<sup>3</sup>

Limit value type : DNEL Consumer (systemic)

Exposure route : Dermal

Exposure frequency : Long-term

Limit value : 345 µg/kg bw/day

Limit value type : DMEL worker (systemic)

# Safety Data Sheet

## according to Regulation (EC) No. 1907/2006 (REACH)



**Trade name :** Lignodur FlexGuard 871 - Protect-Qualität  
Topcoat 871 - Protect Quality

**Revision date :** 20.04.2022

**Print date :** 20.04.2022

**Version (Revision) :** 22.0.1 (22.0.0)

Exposure route : Inhalation  
Exposure frequency : Long-term  
Limit value : 6,81 mg/m<sup>3</sup>  
Limit value type : DMEL worker (systemic)  
Exposure route : Dermal  
Exposure frequency : Long-term  
Limit value : 966 µg/kg bw/day

### PNEC

2-BUTOXYETHANOL ; CAS No. : 111-76-2

Limit value type : PNEC (Industrial)  
Exposure route : Water (Including sewage plant)  
Limit value : 8,8 mg/l  
Limit value type : PNEC (Industrial)  
Exposure route : Soil  
Limit value : 2,8 mg/kg

ZINC PYRITHIONE ; CAS No. : 13463-41-7

Limit value type : PNEC (Aquatic, freshwater)  
Exposure route : Water (Including sewage plant)  
Exposure time : Short-term  
Limit value : 90 ng/L  
Limit value type : PNEC (Aquatic, marine water)  
Exposure route : Water (Including sewage plant)  
Exposure time : Short-term  
Limit value : 90 ng/L  
Limit value type : PNEC (Sediment, freshwater)  
Exposure route : Water (Including sewage plant)  
Exposure time : Short-term  
Limit value : 9,5 µg/kg dry weight  
Limit value type : PNEC (Sediment, marine water)  
Exposure route : Water (Including sewage plant)  
Exposure time : Short-term  
Limit value : 9,5 µg/kg dry weight  
Limit value type : PNEC (Soil)  
Exposure route : Soil  
Exposure time : Short-term  
Limit value : 1,02 mg/kg dry weight  
Limit value type : PNEC (Sewage treatment plant)  
Exposure route : Water (Including sewage plant)  
Exposure time : Short-term  
Limit value : 10 µg/l

1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5

Limit value type : PNEC (Aquatic, freshwater)  
Exposure route : Water (Including sewage plant)  
Exposure time : Short-term  
Limit value : 4,03 µg/l  
Limit value type : PNEC (Aquatic, intermittent release)  
Exposure route : Water (Including sewage plant)  
Exposure time : Short-term  
Limit value : 1,1 µg/l  
Limit value type : PNEC (Aquatic, marine water)  
Exposure route : Water (Including sewage plant)  
Exposure time : Short-term  
Limit value : 403 ng/L  
Limit value type : PNEC (Aquatic, marine water)  
Exposure route : Water (Including sewage plant)

# Safety Data Sheet

## according to Regulation (EC) No. 1907/2006 (REACH)



**Trade name :** Lignodur FlexGuard 871 - Protect-Qualität  
Topcoat 871 - Protect Quality

**Revision date :** 20.04.2022

**Print date :** 20.04.2022

**Version (Revision) :** 22.0.1 (22.0.0)

Exposure time :	Long-term
Limit value :	110 ng/L
Limit value type :	PNEC Soil, Freshwater
Exposure route :	Soil
Exposure time :	Short-term
Limit value :	49,9 µg/kg dry weight
Limit value type :	PNEC (Soil)
Exposure route :	Soil
Exposure time :	Short-term
Limit value :	3 mg/kg dry weight
Limit value type :	PNEC Soil, Marine water
Exposure route :	Soil
Exposure time :	Short-term
Limit value :	4,99 µg/kg dry weight
Limit value type :	PNEC (Sewage treatment plant)
Exposure route :	Water (Including sewage plant)
Exposure time :	Short-term
Limit value :	1,03 mg/l

## 8.2 Exposure controls

### Appropriate engineering controls

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL (=Occupational Exposure Limit), suitable respiratory protection must be worn. Observe data available of section 7.

### Personal protection equipment

#### Eye/face protection

Use protection glasses in case of spattering.

#### Skin protection

##### Hand protection

At use as agreed a protective gloves from nitrile rubber, tested according to EN 374, with a material thickness 0,38 mm has to be used. Notes of the manufacturer have to be taken into account. Penetration time of the glove material: > = 8 h.

By longer or repeated contact the penetration times can be considerably shorter. The protective gloves should be replaced after the first wear out or a damage of the gloves. Gloves of cotton should be used under the gloves of polychloropren or nitrile rubber. After washing hands replace lost skin fat by fat containing skin creams.

##### Body protection

Using protective clothing. If the product must sprayed, use a disposable protective suit.

### Respiratory protection

Breathing protection equipment is not necessary by brush or roll application of the Product in good ventilated rooms. By spraying: Use the combination filter mask A2/P2. Do not breathe gas or spray.

### General information

Avoid contact with eyes and skin. Immediately remove all contaminated clothing. Do not eat or drink during work - no smoking. Wash hands before breaks and after work. Ensure a good ventilation in room and working area. Do not breathe gas or spray.

### Environmental exposure controls

The product should not reach waters and the ground. If the product contaminates lakes, rivers or sewages, inform appropriate authorities in accordance with local regulations.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

# Safety Data Sheet

## according to Regulation (EC) No. 1907/2006 (REACH)



**Trade name :** Lignodur FlexGuard 871 - Protect-Qualität  
Topcoat 871 - Protect Quality  
**Revision date :** 20.04.2022  
**Print date :** 20.04.2022

**Version (Revision) :** 22.0.1 (22.0.0)

**Physical state :** Liquid.

**Colour :** conformable to product designation.

### Odour

Poor, characteristic.

### Safety characteristics

<b>Melting point/freezing point :</b>	( 1013 hPa )		No data available	
<b>Initial boiling point and boiling range :</b>	( 1013 hPa )	>	100	°C
<b>Decomposition temperature :</b>	( 1013 hPa )		No data available	
<b>Flash point :</b>			not applicable	
<b>Auto-ignition temperature :</b>			not applicable	
<b>Lower explosion limit :</b>			not applicable	
<b>Upper explosion limit :</b>			not applicable	
<b>Vapour pressure :</b>	( 50 °C )		No data available	
<b>Density :</b>	( 20 °C )	approx.	1,05 - 1,35	g/cm <sup>3</sup>
<b>Solvent separation test :</b>	( 20 °C )		not applicable	
<b>Water solubility :</b>	( 20 °C )		mixable	
<b>pH :</b>			8 - 9	
<b>log P O/W :</b>			No data available	
<b>Flow time :</b>	( 20 °C )		No data available	DIN-cup 4 mm
<b>Viscosity :</b>	( 20 °C )		thixotropic	
<b>Kinematic viscosity :</b>	( 40 °C )		No data available	
<b>Relative vapour density :</b>	( 20 °C )		No data available	
<b>VOC-value :</b>		max.	100	g/l
<b>Flammable liquids :</b>	The product is not ignitable.			
<b>Particle Characteristics :</b>	not applicable			

## 9.2 Other information

Other physical and chemical data have not been determined.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No dangers connected by a possible reactivity of the product are known to proper handling and storage.

### 10.2 Chemical stability

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

### 10.3 Possibility of hazardous reactions

No dangerous reactions are known if stored and handled the product correctly.

### 10.4 Conditions to avoid

Keep away from frost, heat and direct sunlight.

### 10.5 Incompatible materials

No dangerous reaction known. Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

### 10.6 Hazardous decomposition products

No dangerous decomposition product are known if stored and handled correctly. When exposed to high temperatures or in case of fire hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen, may produced.

## SECTION 11: Toxicological information

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

#### Acute toxicity



# Safety Data Sheet

## according to Regulation (EC) No. 1907/2006 (REACH)



**Trade name :** Lignodur FlexGuard 871 - Protect-Qualität  
Topcoat 871 - Protect Quality

**Revision date :** 20.04.2022

**Print date :** 20.04.2022

**Version (Revision) :** 22.0.1 (22.0.0)

### Acute toxicity:

- Acute oral toxicity: No data available;
- Acute dermal toxicity: No data available;
- Acute inhalation toxicity: No data available.

### Acute oral toxicity

Parameter :	ATEmix calculated
Exposure route :	Oral
Effective dose :	502816 mg/kg
Parameter :	LD50 ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )
Exposure route :	Oral
Species :	Rat
Effective dose :	1480 mg/kg
Parameter :	LD50 ( ZINC PYRITHIONE ; CAS No. : 13463-41-7 )
Exposure route :	Oral
Species :	Rat
Effective dose :	200 mg/kg
Parameter :	LD50 ( TERBUTRYN ; CAS No. : 886-50-0 )
Exposure route :	Oral
Species :	Rat
Effective dose :	500 mg/kg
Parameter :	LD50 ( 1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5 )
Exposure route :	Oral
Species :	Rat
Effective dose :	597 mg/kg
Parameter :	LD50 ( 2-OCTYL-2H-ISOTHIAZOL-3-ONE ; CAS No. : 26530-20-1 )
Exposure route :	Oral
Species :	Rat
Effective dose :	> 500 mg/kg

### Acute dermal toxicity

Parameter :	ATEmix calculated
Exposure route :	Dermal
Effective dose :	not relevant
Parameter :	LC50 ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )
Exposure route :	Dermal
Species :	Rabbit
Effective dose :	> 2000 mg/kg
Parameter :	LD50 ( ZINC PYRITHIONE ; CAS No. : 13463-41-7 )
Exposure route :	Dermal
Species :	Rat
Effective dose :	> 2000 mg/kg
Parameter :	LD50 ( TERBUTRYN ; CAS No. : 886-50-0 )
Exposure route :	Dermal
Species :	Rat
Effective dose :	> 2000 mg/kg
Parameter :	LD50 ( 1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5 )
Exposure route :	Dermal
Species :	Rat
Effective dose :	> 2000 mg/kg
Parameter :	LD50 ( 2-OCTYL-2H-ISOTHIAZOL-3-ONE ; CAS No. : 26530-20-1 )
Exposure route :	Dermal
Species :	Rat
Effective dose :	> 900 mg/kg

### Acute inhalation toxicity

Parameter :	ATEmix calculated
Exposure route :	Inhalation (vapour)

# Safety Data Sheet

## according to Regulation (EC) No. 1907/2006 (REACH)



**Trade name :** Lignodur FlexGuard 871 - Protect-Qualität  
Topcoat 871 - Protect Quality

**Revision date :** 20.04.2022

**Print date :** 20.04.2022

**Version (Revision) :** 22.0.1 (22.0.0)

Effective dose : 460,9 mg/l  
Parameter : LC50 ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )  
Exposure route : Inhalation  
Species : Rat  
Effective dose : 800 ppm  
Exposure time : 8 h  
Parameter : LC50 ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )  
Exposure route : Inhalation  
Species : Mouse  
Effective dose : 700 ppm  
Parameter : LC50 ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )  
Exposure route : Inhalation  
Species : Rat  
Effective dose : 3,9 mg/l  
Exposure time : 8 h  
Parameter : LC50 ( ZINC PYRITHIONE ; CAS No. : 13463-41-7 )  
Exposure route : Inhalation  
Effective dose : 0,5 mg/l  
Exposure time : 4 h  
Parameter : LC50 ( TERBUTRYN ; CAS No. : 886-50-0 )  
Exposure route : Inhalation  
Species : Rat  
Effective dose : 5,21 mg/l  
Exposure time : 4 h  
Parameter : LC50 ( 2-OCTYL-2H-ISOTHIAZOL-3-ONE ; CAS No. : 26530-20-1 )  
Exposure route : Inhalation  
Species : Rat  
Effective dose : 0,27 mg/l  
Exposure time : 4 h

### Corrosion

- To the skin: Not expecting any damage or irritancy.
- At the eye: Not expecting any damage or irritancy.

### Respiratory or skin sensitisation

The product is labeled as skin sensitizing.

#### Skin sensitisation

Parameter : Skin sensitisation ( ZINC PYRITHIONE ; CAS No. : 13463-41-7 )  
Species : Mouse  
Result : Not sensitising.  
Method : OECD 429  
Parameter : Skin sensitisation ( 1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5 )  
Species : Mouse  
Result : Sensitising.  
Method : OECD 429

### CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

The product is not classified as human germ cell mutagenic, carcinogenic or human reproductive toxic (CMR effects).

#### STOT-single exposure

No risk expected.

#### STOT-repeated exposure

No risk expected.

#### Aspiration hazard

No risk expected.

## 11.2 Information on other hazards

**Trade name :** Lignodur FlexGuard 871 - Protect-Qualität  
Topcoat 871 - Protect Quality  
**Revision date :** 20.04.2022  
**Print date :** 20.04.2022

**Version (Revision) :** 22.0.1 (22.0.0)

### Endocrine disrupting properties

The product does not contain any substances with endocrine-disrupting properties according to Article 59 Paragraph 1 or substances with endocrine-disrupting properties according to Regulations (EU) 2017/2100 or (EU) 2018/605.

### Other adverse effects

This product is unlikely to harm health, given normal and proper handling and hygienic precautions.

### Additional information

The product is classified in toxicological terms on the basis of the results of the calculation procedure outlined within the Regulation (EC) No 1272/2008 (CLP-Regulation), listed in sections 2 and 3.

At proper dealing and use as agreed the product does not cause any effects bad for health after our experiences and the information submitted to us.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Aquatic toxicity

##### Acute (short-term) fish toxicity

Parameter :	LC50 ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )
Species :	Oncorhynchus mykiss (Rainbow trout)
Effective dose :	1474 mg/l
Exposure time :	96 h
Parameter :	LC50 ( TERBUTRYN ; CAS No. : 886-50-0 )
Species :	Danio rerio (zebrafish)
Effective dose :	1,8 mg/l
Exposure time :	96 h
Parameter :	LC50 ( 2-OCTYL-2H-ISOTHIAZOL-3-ONE ; CAS No. : 26530-20-1 )
Species :	Oncorhynchus mykiss (Rainbow trout)
Effective dose :	0,036 mg/l
Exposure time :	96 h

##### Chronic (long-term) fish toxicity

Parameter :	NOEC ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )
Species :	Danio rerio (zebrafish)
Effective dose :	> 100 mg/l
Exposure time :	21 D
Parameter :	NOEC ( ZINC PYRITHIONE ; CAS No. : 13463-41-7 )
Species :	Danio rerio (zebrafish)
Effective dose :	0,00125 mg/l
Exposure time :	28 D
Method :	OECD 215
Parameter :	NOEC ( 1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5 )
Species :	Oncorhynchus mykiss (Rainbow trout)
Evaluation parameter :	Chronic (long-term) fish toxicity
Effective dose :	0,21 mg/l
Exposure time :	28 D
Method :	OECD 215
Parameter :	NOEC ( 2-OCTYL-2H-ISOTHIAZOL-3-ONE ; CAS No. : 26530-20-1 )
Species :	Oncorhynchus mykiss (Rainbow trout)
Effective dose :	0,022 mg/l
Exposure time :	28 D

##### Acute (short-term) toxicity to crustacea

Parameter :	EC50 ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )
Species :	Daphnia magna (Big water flea)
Effective dose :	1550 mg/l
Exposure time :	48 h

# Safety Data Sheet

## according to Regulation (EC) No. 1907/2006 (REACH)



**Trade name :** Lignodur FlexGuard 871 - Protect-Qualität  
Topcoat 871 - Protect Quality

**Revision date :** 20.04.2022

**Print date :** 20.04.2022

**Version (Revision) :** 22.0.1 (22.0.0)

Parameter : EC50 ( TERBUTRYN ; CAS No. : 886-50-0 )  
Species : Daphnia magna (Big water flea)  
Effective dose : 7,1 mg/l  
Exposure time : 48 h

Parameter : EC50 ( 2-OCTYL-2H-ISOTHIAZOL-3-ONE ; CAS No. : 26530-20-1 )  
Species : Daphnia magna (Big water flea)  
Effective dose : 0,42 mg/l  
Exposure time : 48 h

### Chronic (long-term) toxicity to aquatic invertebrate

Parameter : NOEC ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )  
Species : Daphnia magna (Big water flea)  
Effective dose : 100 mg/l  
Exposure time : 21 D

Parameter : NOEC ( ZINC PYRITHIONE ; CAS No. : 13463-41-7 )  
Species : Daphnia magna (Big water flea)  
Effective dose : 0,0022 mg/l  
Exposure time : 21 D  
Method : OECD 211

Parameter : NOEC ( 1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Chronic (long-term) daphnia toxicity  
Effective dose : 1,2 mg/l  
Exposure time : 21 D  
Method : OECD 211

Parameter : NOEC ( 2-OCTYL-2H-ISOTHIAZOL-3-ONE ; CAS No. : 26530-20-1 )  
Species : Daphnia magna (Big water flea)  
Effective dose : 0,002 mg/l  
Exposure time : 21 D

### Acute (short-term) toxicity to algae and cyanobacteria

Parameter : EbC50 ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )  
Species : Pseudokirchneriella subcapitata  
Effective dose : 911 mg/l  
Exposure time : 72 h

Parameter : EC50 ( TERBUTRYN ; CAS No. : 886-50-0 )  
Species : Pseudokirchneriella subcapitata  
Effective dose : 0,104 mg/l  
Exposure time : 72 h

Parameter : IC50 ( TERBUTRYN ; CAS No. : 886-50-0 )  
Species : Scenedesmus capricornutum  
Effective dose : 0,0055 mg/l  
Exposure time : 72 h

Parameter : EC50 ( 2-OCTYL-2H-ISOTHIAZOL-3-ONE ; CAS No. : 26530-20-1 )  
Species : Scenedesmus subspicatus  
Effective dose : 0,084 mg/l  
Exposure time : 72 h

### Chronic (long-term) toxicity to aquatic algae and cyanobacteria

Parameter : NOEC ( ZINC PYRITHIONE ; CAS No. : 13463-41-7 )  
Species : Pseudokirchneriella subcapitata  
Effective dose : 0,0149 mg/l  
Exposure time : 72 h  
Method : OECD 201

Parameter : NOEC ( ZINC PYRITHIONE ; CAS No. : 13463-41-7 )  
Species : Skeletonema costatum  
Effective dose : 0,00046 mg/l

# Safety Data Sheet

## according to Regulation (EC) No. 1907/2006 (REACH)



**Trade name :** Lignodur FlexGuard 871 - Protect-Qualität  
Topcoat 871 - Protect Quality

**Revision date :** 20.04.2022

**Print date :** 20.04.2022

**Version (Revision) :** 22.0.1 (22.0.0)

Exposure time : 96 h  
Method : OECD 201  
Parameter : NOEC ( 2-OCTYL-2H-ISOTHIAZOL-3-ONE ; CAS No. : 26530-20-1 )  
Species : Chronic (long-term) algae toxicity  
Effective dose : 0,004 mg/l  
Exposure time : 72 h

### Toxicity to other aquatic plants/organisms

Parameter : EC10 ( 1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5 )  
Species : Selenastrum capricornutum  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : 0,04 mg/l  
Exposure time : 72 h  
Method : OECD 201

### Toxicity to microorganisms

Parameter : EC0 ( 2-BUTOXYETHANOL ; CAS No. : 111-76-2 )  
Species : Pseudomonas putida  
Effective dose : > 700 mg/l  
Exposure time : 16 h

### Sewage treatment plant

Parameter : EC20 ( ZINC PYRITHIONE ; CAS No. : 13463-41-7 )  
Inoculum : Activated sludge  
Effective dose : 1,34 mg/l  
Exposure time : 3 h  
Method : OECD 209  
Parameter : EC50 ( ZINC PYRITHIONE ; CAS No. : 13463-41-7 )  
Inoculum : Activated sludge  
Effective dose : 2,8 mg/l  
Exposure time : 3 h  
Method : OECD 209  
Parameter : EC20 ( 1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5 )  
Inoculum : Activated sludge  
Evaluation parameter : Effects in sewage plants  
Effective dose : 3,3 mg/l  
Exposure time : 3 h  
Parameter : EC50 ( 1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5 )  
Inoculum : Activated sludge  
Evaluation parameter : Effects in sewage plants  
Effective dose : 13 mg/l  
Exposure time : 3 h

## 12.2 Persistence and degradability

These are not data available about the potential of the product concerning his persistency and degradability.

### Biodegradation

Parameter : Biodegradation ( 1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5 )  
Inoculum : Degree of elimination  
Degradation rate : approx. 90 %  
Evaluation : Biodegradable.  
Method : OECD 302B  
Parameter : Biodegradation ( 1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5 )  
Inoculum : Degree of elimination  
Degradation rate : > 70 %  
Evaluation : Biodegradable.  
Method : OECD 303A

## 12.3 Bioaccumulative potential

# Safety Data Sheet

## according to Regulation (EC) No. 1907/2006 (REACH)



**Trade name :** Lignodur FlexGuard 871 - Protect-Qualität  
Topcoat 871 - Protect Quality  
**Revision date :** 20.04.2022  
**Print date :** 20.04.2022

**Version (Revision) :** 22.0.1 (22.0.0)

Parameter : Bioconcentration factor (BCF) ( 1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5 )  
Value : 6,95  
Method : OECD 305  
Parameter : Log KOW ( ZINC PYRITHIONE ; CAS No. : 13463-41-7 )  
Value : 1,21  
Method : OECD 107

These are not data available about the bio accumulation potential of the product.

### 12.4 Mobility in soil

These are not data available about the potential of the product concerning his mobility in the ground.  
A penetrating into soil, waters and sewage system should be prevented.

#### Adsorption

Parameter : Log KOW ( 1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5 )  
Effective dose : 0,7  
Evaluation : HPLC method  
Method : OECD 117

### 12.5 Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

### 12.6 Endocrine disrupting properties

The product does not contain any substances with endocrine-disrupting properties according to Article 59 Paragraph 1 or substances with endocrine-disrupting properties according to Regulations (EU) 2017/2100 or (EU) 2018/605.

### 12.7 Other adverse effects

Harmful to aquatic life, may cause long-term adverse effects in the aquatic environment.

### 12.8 Additional ecotoxicological information

Avoid exposing into ground, waterways and drainage.

The classification of the product is based on summation of classified components according to the Regulation (EC) No 1272/2008 (CLP-Regulation). See details in sections 2 and 3.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

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

##### Before intended use

Dispose of contents/container to approved disposal company or local collection according to the local regulations.  
Packaging with not dry uped residues have to dropped at official collecting sites. Packaging with dry uped residues can be disposed together with household garbage or building site garbage. Do not empty into waters or drains.

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

For the product:

Disposal-definition No.: 08 01 11\* - Paint and varnish waste which contains organic solvents or other dangerous substances.

##### After intended use

Only empty packaging can be transferred to recycling. Uncleaned packaging must be disposed of in the same manner as the medium.

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

For the uncleaned packaging:

Disposal-definition No.: 15 01 10 \* packings which contain dangerous substances or are polluted by dangerous substances.

## SECTION 14: Transport information

### 14.1 UN number

No dangerous good in sense of these transport regulations.

# Safety Data Sheet

## according to Regulation (EC) No. 1907/2006 (REACH)



**Trade name :** Lignodur FlexGuard 871 - Protect-Qualität  
Topcoat 871 - Protect Quality

**Revision date :** 20.04.2022

**Print date :** 20.04.2022

**Version (Revision) :** 22.0.1 (22.0.0)

### 14.2 UN proper shipping name

No dangerous good in sense of these transport regulations.

### 14.3 Transport hazard class(es)

No dangerous good in sense of these transport regulations.

### 14.4 Packing group

No dangerous good in sense of these transport regulations.

### 14.5 Environmental hazards

No dangerous good in sense of these transport regulations.

### 14.6 Special precautions for user

None

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not relevant because the product in type of delivery does not transport in bulks according to the International Maritime Organization (IMO) instruments.

## SECTION 15: Regulatory information

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

#### EU legislation

##### Authorisations and/or restrictions on use

##### Restrictions on use

##### Regulation (EC) No. 1907/2006 (REACH), Annex XVII (restrictions)

Use restriction according to REACH annex XVII, no. : 3

##### Other regulations (EU)

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

Product sub-category and VOC limiting values in accordance with appendix II, letter A of the guideline:

Category d, type WB;

VOC limiting value of the category for 2010: 130 g/l.

This product contains max. 100 g/l VOC.

##### National regulations

##### Water hazard class

Classification according to AwSV - Class : 2 (Obviously hazardous to water)

##### Additional information

The product is not classified as a solid substance according to the criteria of the Penetrometer test (ADR, part 2, section 2.3.4) and also fulfils not the criteria for solid substances according to the TRwS 779 number 2.1.1.

Maternity regulations and Young Persons Employment Act are to take into account.

### 15.2 Chemical Safety Assessment

A chemical safety assessments was not carried out.

## SECTION 16: Other information

### 16.1 Indication of changes

02. Classification of the substance or mixture · 02. Labelling according to Regulation (EC) No. 1272/2008 [CLP] - Hazard components for labelling · 02. Special rules for supplemental label elements for certain mixtures · 15. Water hazard class

### 16.2 Abbreviations and acronyms

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)

ADR: European agreement concerning the international carriage of dangerous goods by road (Accord européen relatif transport des marchandises dangereuses par route)

AGW: Occupational threshold limit value (Arbeitsplatzgrenzwert – Germany) AOX: Adsorbable Organic halogen

# Safety Data Sheet

## according to Regulation (EC) No. 1907/2006 (REACH)



**Trade name :** Lignodur FlexGuard 871 - Protect-Qualität  
Topcoat 871 - Protect Quality

**Revision date :** 20.04.2022

**Print date :** 20.04.2022

**Version (Revision) :** 22.0.1 (22.0.0)

compounds  
ATEmix: Calculated acute toxicity estimate of mixture  
BCF: Bio-Concentration Factor  
CAS: Chemical Abstract Service  
CLP: Classification, Labelling and Packaging  
CMR: Substances classified as Carcinogenic, Mutagenic or toxic for Reproduction  
CSR: Chemical Safety Report  
DNEL: Derived No Effect Level  
EC: European Commission  
EC50: Effective Concentration 50%  
ECHA: European Chemical Agency  
EEC: European Economic Community  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
EWC: European Waste Catalogue  
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals  
IATA: International Air Transport Association  
ICAO: International Civil Aviation Organization  
IC50: Inhibition Concentration 50%  
IMDG Code: International Maritime Dangerous Goods Code  
IMO: International Maritime Organization  
LC50: Lethal concentration 50%  
LD50: Lethal Dose 50%  
LOAEL: Lowest Observed Adverse Effect Level  
LOEL: Lowest observable effect level  
MAK: Threshold limit values Germany (Maximale Arbeitsplatzkonzentration - DFG)  
MARPOL: Convention for the Prevention of Marine Pollution from Ships  
MVZ: molar ratio  
n.a.: Not applicable  
n.d.: Not determined  
n.r.: Not relevant  
NLP: No Longer Polymers  
NOAEC: No Observed Adverse Effect Concentration  
NOAEL: No Observed Adverse Effect Level  
NOEC: No Observed Effect Concentration  
NOEL: No Observed Effect Level  
OEL: Occupational Exposure Limit  
PBT: Persistent, bioaccumulative, toxic  
PNEC: Predicted No Effect Concentration  
RCP: Reciprocal calculation procedure  
REACH: Registration, Evaluation and Authorization of Chemical  
RID: Regulations concerning the international carriage of dangerous goods by rail (Règlement International concernant le transport de marchandises dangereuses par chemin de fer)  
STEL: Short-term Exposure Limit  
SVHC: Substance of Very High Concern  
TLV - TWA: Threshold Limit Value - Time Weighted Average  
VOC: Volatile Organic Compounds  
vPvB: Very persistent, very bioaccumulative.

### 16.3 Key literature references and sources for data

None

### 16.4 Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

The evaluation of hazard information of the product was carried out in accordance to Annex I of the REGULATION (EC) No 1272/2008 (CLP Regulation).

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

H301	Toxic if swallowed.
H302	Harmful if swallowed.



# Safety Data Sheet

## according to Regulation (EC) No. 1907/2006 (REACH)



**Trade name :** Lignodur FlexGuard 871 - Protect-Qualität  
Topcoat 871 - Protect Quality  
**Revision date :** 20.04.2022  
**Print date :** 20.04.2022

**Version (Revision) :** 22.0.1 (22.0.0)

---

H311	Toxic 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.
H351i	Suspected of causing cancer if inhaled.
H360D	May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
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.

### 16.6 Training advice

None

### 16.7 Additional information

None

---

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

---