

# Safety Data Sheet

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



**Trade name :** Steriface-Pulver EP/PE 5681 (SORTE 5681)  
**Revision date :** 20.10.2020  
**Print date :** 20.10.2020

**Version (Revision) :** 6.0.1 (6.0.0)

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

### 1.1 Product identifier

Steriface-Pulver EP/PE 5681 (SORTE 5681)

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

Powder coating. Intended purpose see technical data sheet.

#### Relevant identified uses

##### Products Category [PC]

Coatings and paints, thinners, paint removers

##### Remark

The product is intended for professional use.

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

#### Supplier (manufacturer/importer/only representative/downstream user/distributor)

Brillux GmbH & Co. KG, Industrielack  
www.brillux-industrielack.de

**Street :** Otto-Hahn-Straße 14

**Postal code/city :** D-59423 Unna

**Telephone :** +49 2303 8805-0

**Telefax :** +49 2303 8805-119

**Information contact :** E-mail address of the competent person for safety data sheets: sdb@brillux-industrielack.de

### 1.4 Emergency telephone number

Giftinformationszentrum-Nord (poisons centre), consultation in german and english  
Telephone: +49 551 19 24 0

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

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

Aquatic Acute 1 ; H400 - Hazardous to the aquatic environment : Acute 1 ; Very toxic to aquatic life.

Aquatic Chronic 1 ; H410 - Hazardous to the aquatic environment : Chronic 1 ; Very toxic to aquatic life with long lasting effects.

### 2.2 Label elements

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

##### Hazard pictograms



Environment (GHS09)

##### Signal word

Warning

##### Hazard statements

H410 Very toxic to aquatic life with long lasting effects.

##### Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P273 Avoid release to the environment.

P391 Collect spillage.

# Safety Data Sheet

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



Trade name : Steriface-Pulver EP/PE 5681 (SORTE 5681)  
Revision date : 20.10.2020  
Print date : 20.10.2020

Version (Revision) : 6.0.1 (6.0.0)

## Special rules for supplemental label elements for certain mixtures

EUH208 Contains Zinc di(benzothiazol-2-yl) disulphide. May produce an allergic reaction.

### 2.3 Other hazards

None

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Hazardous ingredients

Glass, oxide, silver- and zinc-contg. ; CAS No. : 398477-47-9

Weight fraction :  $\geq 1 - < 10 \%$

Classification 1272/2008 [CLP] : Aquatic Acute 1 ; H400 Aquatic Chronic 1 ; H410 (M Chronic=10000) • (M Acute=100)

Zinc di(benzothiazol-2-yl) disulphide ; REACH No. : 01-2119493020-50 ; EC No. : 205-840-3 ; CAS No. : 155-04-4

Weight fraction :  $\geq 0,25 - < 0,5 \%$

Classification 1272/2008 [CLP] : Skin Sens. 1 ; H317 Aquatic Acute 1 ; H400 Aquatic Chronic 1 ; H410

#### Additional information

Full text of H- and EUH-phrases: see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General information

When in doubt or if symptoms are observed, get medical advice. Change contaminated, saturated clothing. If unconscious place in recovery position and seek medical advice.

#### Following inhalation

Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration. In case of respiratory tract irritation, consult a physician.

#### In case of skin contact

Wash immediately with: Water and soap Do not wash with: Solvents/Thinner

#### After eye contact

Rinse immediately carefully and thoroughly with eye-bath or water. In case of eye irritation consult an ophthalmologist.

#### After ingestion

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Keep at rest. Do NOT induce vomiting. No direct artificial respiration to be given by first aider.

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

No information available.

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

None

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Extinguishing powder, alcohol resistant foam, carbon dioxide (CO<sub>2</sub>), water spray. For fire fighting in manual or automatic powder coating systems in accordance with BGI 764, the extinguishing agent CO<sub>2</sub> can be used in mobile devices and stationary fire extinguishing systems in accordance with the recognised rules of technology. When using extinguishing agents other than CO<sub>2</sub>, the extinguishing effectiveness must be proven.

#### Unsuitable extinguishing media

Full water jet, inert gas with high pressure.

# Safety Data Sheet

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



Trade name : Steriface-Pulver EP/PE 5681 (SORTE 5681)  
Revision date : 20.10.2020  
Print date : 20.10.2020

Version (Revision) : 6.0.1 (6.0.0)

## 5.2 Special hazards arising from the substance or mixture

### Hazardous combustion products

In case of fire may be liberated: Nitrogen oxides (NOx), carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>) and pyrolysis products, toxic.

## 5.3 Advice for firefighters

### Special protective equipment for firefighters

Use suitable breathing apparatus.

## 5.4 Additional information

Burning produces heavy smoke. Use water spray jet to protect personnel and to cool endangered containers. 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

Remove all sources of ignition. See protective measures under point 7 and 8. Avoid dust formation. Do not inhale product dusts.

### 6.2 Environmental precautions

Do not allow to enter into surface water or drains.

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

#### For cleaning up

Take up dust-free and set down dust-free. Use approved industrial vacuum cleaner for removal. (Vacuum cleaner type B1, suitable for vacuuming up combustible dust of dust explosion class St1 and St2 in zone 11). Treat the recovered material as prescribed in the section on waste disposal.

### 6.4 Reference to other sections

None

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Protective measures

Avoid: Generation/formation of dust, dust deposits, inhalation of dust/particles. Only use the material in places where open light, fire and other flammable sources can be kept away. If handled uncovered, arrangements with local exhaust ventilation should be used if possible. If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means.

#### Measures to prevent fire

Dust can form an explosive mixture with air. Take precautionary measures against static discharges. Wear anti-static footwear and clothing Use only antistatically equipped (spark-free) tools.

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

#### Requirements for storage rooms and vessels

Floors should be impervious and easy to clean.

#### Hints on joint storage

**Storage class (TRGS 510) :** 11

#### Do not store together with

Strong acid, strong alkali, oxidising agent, food and feedingstuffs.

#### Further information on storage conditions

**Do not store at temperatures above :** 25 °C

**Protect against :** Humidity.

### 7.3 Specific end use(s)

Powder coating. Intended purpose see technical data sheet.

**Trade name :** Steriface-Pulver EP/PE 5681 (SORTE 5681)  
**Revision date :** 20.10.2020  
**Print date :** 20.10.2020

**Version (Revision) :** 6.0.1 (6.0.0)

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limit values

##### GENERAL LIMIT VALUE FOR DUST

Limit value type (country of origin) : TRGS 900 ( D )  
Parameter : A: respirable fraction  
Limit value : 1,25 mg/m<sup>3</sup>  
Peak limitation : 2(II)  
Version : 29.03.2019

Limit value type (country of origin) : TRGS 900 ( D )  
Parameter : E: inhalable fraction  
Limit value : 10 mg/m<sup>3</sup>  
Peak limitation : 2(II)  
Version : 29.03.2019

#### DNEL-/PNEC-values

##### DNEL/DMEL

Zinc di(benzothiazol-2-yl) disulphide ; CAS No. : 155-04-4

Limit value type : DNEL worker (systemic)

Exposure route : Inhalation

Exposure frequency : Long-term

Limit value : 10,5 mg/m<sup>3</sup>

Limit value type : DNEL worker (systemic)

Exposure route : Inhalation

Exposure frequency : Short-term

Limit value : 21 mg/m<sup>3</sup>

Limit value type : DNEL worker (systemic)

Exposure route : Dermal

Exposure frequency : Long-term

Limit value : 6 mg/kg

Limit value type : DNEL worker (systemic)

Exposure route : Dermal

Exposure frequency : Short-term

Limit value : 12 mg/kg

##### PNEC

Zinc di(benzothiazol-2-yl) disulphide ; CAS No. : 155-04-4

Limit value type : PNEC (Aquatic, freshwater)

Exposure route : Water (Including sewage plant)

Limit value : 0,0041 mg/l

Limit value type : PNEC Intermittierende Einleitung

Exposure route : Water (Including sewage plant)

Limit value : 0,005 mg/l

Limit value type : PNEC (Aquatic, marine water)

Exposure route : Water (Including sewage plant)

Limit value : 0,00041 mg/l

Limit value type : PNEC soil

Exposure route : Soil

Limit value : 0,027 mg/kg

Limit value type : PNEC Soil, Freshwater

Exposure route : Soil

Limit value : 0,147 mg/kg

Limit value type : PNEC Soil, Marine water

Exposure route : Soil

Limit value : 0,0147 mg/kg

# Safety Data Sheet

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



**Trade name :** Steriface-Pulver EP/PE 5681 (SORTE 5681)  
**Revision date :** 20.10.2020  
**Print date :** 20.10.2020

**Version (Revision) :** 6.0.1 (6.0.0)

Limit value type : PNEC (Sewage treatment plant)  
Exposure route : Water (Including sewage plant)  
Limit value : 0,3 mg/l

## 8.2 Exposure controls

### Personal protection equipment

#### Eye/face protection

##### Suitable eye protection

Dust protection eye glasses

##### Remark

Note DGUV-Rule 112-192.

#### Skin protection

##### Hand protection

**Suitable gloves type :** Disposable gloves. Gloves with long cuffs

**Required properties :** dust-tight. antistatic.

**Remark :** After washing hands replace lost skin fat by fat containing skin creams. Note DGUV-Rule 112-195. Note TRGS 401.

##### Body protection

Personel should wear protective clothings and all parts of the body should be washed after contact. Care should be taken in the selection of protective clothing to ensure that inflammation and irritation of the skin at neck and wrists through contact with the powder is avoided.

**Recommended material :** Natural fibres (e.g. cotton), heat-resistant synthetic fibres.

**Remark :** Note DGUV-Rule 112-189. Note TRGS 401.

#### Respiratory protection

Respiratory protection necessary at: insufficient exhaust

##### Suitable respiratory protection apparatus

Use breathing filter P2 (particle).

European Committee for Standardization (CEN) standards EN 136, 140 and 405 provide respirator masks and EN 149 and 143 provide filter recommendations.

##### Remark

Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190). Note TRGS 402.

#### General information

Used working clothes should not be worn outside the work area.

#### Other protection measures

Technical measures and the application of suitable work processes have priority over personal protection equipment.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

**Physical state :** Powder (1-150 µm)

**Colour :** According to product identification.

#### Odour

Poor, characteristic.

#### Safety characteristics

<b>Melting point/freezing point :</b>	>	50 °C
<b>Decomposition temperature :</b>	>	250 °C
<b>Flash point :</b>		not applicable
<b>Auto-ignition temperature :</b>	>	450 °C
<b>Lower explosion limit :</b>	approx.	50 - 70 g/m <sup>3</sup>

# Safety Data Sheet

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



Trade name : Steriface-Pulver EP/PE 5681 (SORTE 5681)  
Revision date : 20.10.2020  
Print date : 20.10.2020

Version (Revision) : 6.0.1 (6.0.0)

<b>Upper explosion limit :</b>		No data available
<b>Vapour pressure :</b>	( 50 °C )	not applicable
<b>Density :</b>	( 20 °C )	1,2 - 1,7 g/cm <sup>3</sup>
<b>Water solubility :</b>	( 20 °C )	practically insoluble
<b>log P O/W :</b>		not relevant
<b>Viscosity :</b>	( 23 °C )	not applicable
<b>Cinematic viscosity :</b>	( 40 °C )	not applicable
<b>Solid content :</b>		100 Wt %
<b>Odour threshold :</b>		not relevant
<b>Relative vapour density :</b>	( 20 °C )	not applicable
<b>Vapourisation rate :</b>		not applicable
<b>Flammable solids :</b>	Not highly flammable.	
<b>Oxidising solids :</b>	Not oxidising.	

## 9.2 Other information

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

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No information available.

### 10.2 Chemical stability

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

### 10.3 Possibility of hazardous reactions

No information available.

### 10.4 Conditions to avoid

No information available.

### 10.5 Incompatible materials

No information available.

### 10.6 Hazardous decomposition products

Does not decompose when used for intended uses.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

##### Acute oral toxicity

Parameter :	ATEmix calculated
Exposure route :	Oral
Effective dose :	not relevant
Parameter :	LD50 ( Glass, oxide, silver- and zinc-contg. ; CAS No. : 398477-47-9 )
Exposure route :	Oral
Species :	Rat
Effective dose :	> 5000 mg/kg

##### Acute dermal toxicity

Parameter :	ATEmix calculated
Exposure route :	Dermal
Effective dose :	not relevant

##### Acute inhalation toxicity

Parameter :	ATEmix calculated
Exposure route :	Inhalation (dust/mist)
Effective dose :	not relevant

### 11.3 Symptoms related to the physical, chemical and toxicological characteristics

# Safety Data Sheet

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



Trade name : Steriface-Pulver EP/PE 5681 (SORTE 5681)  
Revision date : 20.10.2020  
Print date : 20.10.2020

Version (Revision) : 6.0.1 (6.0.0)

## In case of skin contact

Powder coatings can cause localised skin irritation in folds of the skin or in contact with tight clothing.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Aquatic toxicity

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

Parameter : LC50 ( Glass, oxide, silver- and zinc-contg. ; CAS No. : 398477-47-9 )  
Species : Pimephales promelas (fathead minnow)  
Effective dose : 0,0023 mg/l  
Exposure time : 96 h

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

Parameter : NOEC ( Glass, oxide, silver- and zinc-contg. ; CAS No. : 398477-47-9 )  
Species : Oncorhynchus mykiss (Rainbow trout)  
Effective dose : 0,00002 mg/l  
Exposure time : 60 D

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

Parameter : EC50 ( Glass, oxide, silver- and zinc-contg. ; CAS No. : 398477-47-9 )  
Species : Daphnia magna (Big water flea)  
Effective dose : 0,00022 mg/l  
Exposure time : 48 h

##### Chronic (long-term) toxicity to crustacea

Parameter : NOEC ( Glass, oxide, silver- and zinc-contg. ; CAS No. : 398477-47-9 )  
Species : Ceriodaphnia spec  
Effective dose : 0,00053 mg/l  
Exposure time : 10 D

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

Parameter : EC50 ( Glass, oxide, silver- and zinc-contg. ; CAS No. : 398477-47-9 )  
Species : Pseudokirchneriella subcapitata  
Effective dose : 0,004 mg/l  
Exposure time : 72 h

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

Parameter : NOEC ( Zinc di(benzothiazol-2-yl) disulphide ; CAS No. : 155-04-4 )  
Effective dose : 0,066 mg/l  
Exposure time : 72 h

##### Toxicity to microorganisms

Parameter : EC50 ( Zinc di(benzothiazol-2-yl) disulphide ; CAS No. : 155-04-4 )  
Effective dose : 1220 mg/l  
Exposure time : 3 h

### 12.2 Persistence and degradability

#### Abiotic degradation

Mechanical separation in a suitable sewage plant is possible.

#### Biodegradation

In accordance with the required stability the product is poorly biodegradable.

### 12.3 Bioaccumulative potential

No information available.

### 12.4 Mobility in soil

No information available.

### 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 Other adverse effects

# Safety Data Sheet

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



Trade name : Steriface-Pulver EP/PE 5681 (SORTE 5681)  
Revision date : 20.10.2020  
Print date : 20.10.2020

Version (Revision) : 6.0.1 (6.0.0)

No information available.

## 12.7 Additional ecotoxicological information

### Additional information

Do not allow uncontrolled discharge of product into the environment.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. Dispose of waste according to applicable legislation.

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

##### Before intended use

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

08 02 01 (Waste coating powders)

##### Other disposal recommendations

Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

### 13.2 Additional information

Note sections 7 and 8.

## SECTION 14: Transport information

### 14.1 UN number

UN 3077

### 14.2 UN proper shipping name

#### Land transport (ADR/RID)

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. ( DISILVER OXIDE · Zinc di(benzothiazol-2-yl) disulphide )

#### Sea transport (IMDG)

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. ( DISILVER OXIDE )

#### Air transport (ICAO-TI / IATA-DGR)

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. ( DISILVER OXIDE · Zinc di(benzothiazol-2-yl) disulphide )

### 14.3 Transport hazard class(es)

#### Land transport (ADR/RID)

Class(es) : 9  
Classification code : M7  
Hazard identification number (Kemler No.) : 90  
Tunnel restriction code : -  
Special provisions : LQ 5 kg · E 1 · ADR : - (SP 375 <= 5 l/kg)  
Hazard label(s) : 9 / N

#### Sea transport (IMDG)

Class(es) : 9  
EmS-No. : F-A / S-F  
Special provisions : LQ 5 kg · E 1 · IMDG : - (SP 2.10.2.7 <= 5 l/kg)  
Hazard label(s) : 9 / N

#### Air transport (ICAO-TI / IATA-DGR)

Class(es) : 9  
Special provisions : E 1 · IATA : - (SP A197 <= 5 l/kg)  
Hazard label(s) : 9 / N

### 14.4 Packing group

III

### 14.5 Environmental hazards



# Safety Data Sheet

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



Trade name : Steriface-Pulver EP/PE 5681 (SORTE 5681)  
Revision date : 20.10.2020  
Print date : 20.10.2020

Version (Revision) : 6.0.1 (6.0.0)

Land transport (ADR/RID) : Yes  
Sea transport (IMDG) : Yes (P)  
Air transport (ICAO-TI / IATA-DGR) : Yes

## 14.6 Special precautions for user

None

## 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

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

##### Restrictions of occupation

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).  
Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

#### National regulations

##### Technische Anleitung Luft (TA-Luft)

Weight fraction (Number 5.2.5. I) : < 0,5 %

##### Water hazard class (WGK)

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

##### Other regulations, restrictions and prohibition regulations

Note TRGS 001. Note TRGS 400.

### 15.2 Chemical safety assessment

A chemical safety assessment has not been carried out.

## SECTION 16: Other information

### 16.1 Indication of changes

15. Water hazard class (WGK)

### 16.2 Abbreviations and acronyms

AwSV: Ordinance on plants for the handling of substances hazardous to water. BGR(I): Rule (Information) from the german employers liability insurance association. DGUV: German Statutory Accident Insurance. EWC: European Waste Catalogue. TRGS: German Technical Rule for Hazardous Substances. VCI: German chemical industry association.

### 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]

Calculation method.

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

H317	May cause an allergic skin reaction.
H400	Very toxic to aquatic life.
H410	Very 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.

**Safety Data Sheet**  
**according to Regulation (EC) No. 1907/2006 (REACH)**



**Trade name :** Steriface-Pulver EP/PE 5681 (SORTE 5681)  
**Revision date :** 20.10.2020  
**Print date :** 20.10.2020

**Version (Revision) :** 6.0.1 (6.0.0)

---

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.

---