

Trade name: Zinci oxidum pulv

Substance number: 068568

Version: 5 / CH

Date revised: 09.02.2023

Replaces Version: 4 / CH

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

1.1. Product identifier

Zinci oxidum pulv

Item No. 06856800

Registration no.

EC No.: 215-222-5

CAS No. 1314-13-2

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

Use of the substance/preparation

industry, Chemical

1.3. Details of the supplier of the safety data sheet

Address/Manufacturer

Hänseler AG

Industriestrasse 35

9100 Herisau

Telephone no. 0041 (0)71 353 58 58

E-mail address of sdb@haenseler.ch

person responsible
for this SDS

1.4. Emergency telephone number

Switzerland :145 / Abroad +41 (0)44 251 51 51

SECTION 2: Hazards identification ***

2.1. Classification of the substance or mixture

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

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

Aquatic Acute 1 H400

Aquatic Chronic 1 H410

The product is classified and labelled in accordance with Regulation (EC) No 1272/2008

For explanation of abbreviations see section 16.

2.2. Label elements

Labelling according to regulation (EC) No 1272/2008

Hazard pictograms



Signal word

Warning

Hazard statements ***

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.

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P391 Collect spillage.
P501.9 Dispose of contents/container as problematic waste.

2.3. Other hazards

The Substance does not meet PBT-criteria. This substance does not meet the vPvB-criteria. This substance does not have endocrine disrupting properties with respect to humans. This substance does not have endocrine disrupting properties with respect to non-target organisms.

SECTION 3: Composition/information on ingredients *****Chemical characterization**

ZnO

Molecular weight

Value	81.83	g/mol
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Hazardous ingredients *****zinc oxide**

CAS No.	1314-13-2	
EINECS no.	215-222-5	
Registration no.	01-2119463881-32-0043	
Concentration	>= 50	%
Classification (Regulation (EC) No. 1272/2008)		
	Aquatic Acute 1	H400
	Aquatic Chronic 1	H410

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

Remove affected person from danger area.

After inhalation

Ensure supply of fresh air. In the event of symptoms take medical treatment.

After skin contact

Wash off immediately with soap and water and rinse well. Remove contaminated, soaked clothing immediately and dispose of safely.

After eye contact

Separate eyelids, wash the eyes thoroughly with water (15 min.). By continuous complaints consult a physician.

After ingestion

Rinse out mouth and give plenty of water to drink. In the event of symptoms take medical treatment.

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

Product itself is non-combustible; adapt fire extinguishing measures to surrounding areas.

Non suitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

None known

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5.3. Advice for firefighters

Special protective equipment for fire-fighting

Use self-contained breathing apparatus. Wear protective clothing.

Other information

Cool endangered containers with water spray jet. Fire residues and contaminated fire-fighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Ensure adequate ventilation. Do not inhale dust. Wear protective equipment. Refer to protective measures listed in Sections 7 and 8.

6.2. Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers). Do not allow to enter drains or waterways.

6.3. Methods and material for containment and cleaning up

Pick up mechanically. Dampen, pick up mechanically and dispose of.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid longer or repeated exposition. Avoid dust formation. Provide good ventilation of working area (local exhaust ventilation if necessary).

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep tightly closed in a dry and cool place.

Hints on storage assembly

Do not store together with: Acids, bases, Reducing agents, Oxidising agents

Storage classes

Storage class according to TRGS 510	13	Non- combustible solids
Storage category (Switzerland)	11/13	Other solid hazardous substances with classification/labelling hazardous

Further information on storage conditions

Keep only in the original container, tightly closed, in a well ventilated place.

SECTION 8: Exposure controls/personal protection ***

8.1. Control parameters

Exposure limit values ***

zinc oxide

List	SUVA	
Type	MAK	
Value	3	mg/m ³
Short term exposure limit	3	mg/m ³
Remarks: MetallrauchKT HU; NIOSH, OSHA		

Derived No/Minimal Effect Levels (DNEL/DMEL)

zinc oxide

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Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	5	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	0.5	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	83	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	2.5	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	83	mg/kg/d

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	0.83	mg/kg/d

Predicted No Effect Concentration (PNEC)

zinc oxide

Type of value	PNEC	
Type	Freshwater	
Concentration	20.6	mg/l

Type of value	PNEC	
Type	Saltwater	
Concentration	6.1	mg/l

Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	6.1	mg/l

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Type of value	PNEC		
Type	Freshwater sediment		
Concentration	117.8		mg/kg
Type of value	PNEC		
Type	Marine sediment		
Concentration	56.5		mg/kg
Type of value	PNEC		
Type	Soil		
Concentration	35.6		mg/kg

8.2. Exposure controls

General protective and hygiene measures

Do not breathe dust. Remove contaminated, soaked clothing immediately and dispose of safely. Wash hands and face after work.

Respiratory protection

Breathing apparatus in the event of aerosol. Particle filter P2; EN 143

Hand protection

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

Appropriate Material	nitrite rubber - NBR		
Material thickness	0.11	mm	
Breakthrough time	> 480	min	

Hand protection must comply with EN 374.

Eye protection

Tightly fitting safety glasses; Eye protection must comply with EN 166.

Body protection

Clothing as usual in the chemical industry.

SECTION 9: Physical and chemical properties ***

9.1. Information on basic physical and chemical properties

Physical state	Crystalline powder
Colour	white to light yellow
Odour	odourless
Melting point	
Value	1970 to 1975 °C
Boiling point or initial boiling point and boiling range	
Remarks	Not applicable
Flammability	non flammable
Flash point	
Value	°C
Remarks	Not applicable
pH value	
Value	7
Remarks	Suspension in water
Density and/or relative density	

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Value	5.4	to	5.7	g/cm ³
Temperature	20	°C		

9.2. Other information**Sublimation point**

Value	appr. 1800	°C
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Solubility in water ***

Remarks	virtually insoluble
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Explosive properties

evaluation	no
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Bulk density

Value	300	to	2000	kg/m ³
Method	DIN 53466			

Other information

The product is not dangerous for explosions.

SECTION 10: Stability and reactivity**10.1. Reactivity**Reacts violently with: hydrogen peroxide (H₂O₂). Magnesium**10.2. Chemical stability**

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

10.3. Possibility of hazardous reactions

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

10.4. Conditions to avoid

Protect from heat and direct sunlight. Protect from frost.

10.5. Incompatible materialshydrogen peroxide (H₂O₂). Magnesium, Acids, Bases**10.6. Hazardous decomposition products**

None

SECTION 11: Toxicological information *****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute oral toxicity (Components)****zinc oxide**

Species	rat		
LD50	>	5000	mg/kg

zinc oxide

Species	Human		
LDLo		500	mg/kg
Source	RTECS		

Acute inhalative toxicity (Components)**zinc oxide**

Species	rat		
LC50	>	5.7	mg/l
Duration of exposure		4	h

Skin corrosion/irritation (Components)

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zinc oxide

Species	rabbit
evaluation	non-irritant
Method	OECD 404
Source	LS-5041-00 SDS Grillo 20150330.pdf

Serious eye damage/irritation (Components)**zinc oxide**

Species	rabbit
evaluation	non-irritant
Method	OECD 405

Sensitization (Components)**zinc oxide**

Species	guinea pig
evaluation	non-sensitizing

Mutagenicity**ZnO**

evaluation	No experimental information on genotoxicity in vitro available.
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ZnO

evaluation	No experimental indications on genotoxicity in vivo found.
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Carcinogenicity**ZnO**

evaluation	No indications of carcinogenic effects are available from long-term trials.
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11.2 Information on other hazards**Endocrine disrupting properties with respect to humans****ZnO**

This substance does not have endocrine disrupting properties with respect to humans.

Experience in practice

Inhalation of dusts may irritate the respiratory tract.

SECTION 12: Ecological information *****12.1. Toxicity****Daphnia toxicity (Components)****zinc oxide**

Species	Daphnia		
EC50	0.413		mg/l
Duration of exposure	48	h	
Source	pH<7, Zn++		

zinc oxide

Species	Daphnia		
EC50	0.67		mg/l
Duration of exposure	48	h	
Source	pH<7, ZnO		

Algae toxicity (Components)**zinc oxide**

Species	Selenastrum capricornutum		
ErC50	0.136		mg/l
Duration of exposure	72	h	
Source	pH>7-8.5, Zn++		

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zinc oxide

Species	Selenastrum capricornutum	
ErC50	0.21	mg/l
Duration of exposure	72	h
Source	pH>7-8.5, ZnO	

12.2. Persistence and degradability**Biodegradability****ZnO**

Remarks Not applicable.

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

The Substance does not meet PBT-criteria.

ZnO

This substance does not meet the vPvB-criteria.

12.6 Endocrine disrupting properties**Endocrine disrupting properties with respect to the environment****ZnO**

This substance does not have endocrine disrupting properties with respect to non-target organisms.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations for the product**EWC waste code 06 03 16 metallic oxides other than those mentioned in 06 03 15
Disposal in compliance with local and national regulations.**Disposal recommendations for packaging**Disposal in compliance with local and national regulations.
Dispose of as unused product.**SECTION 14: Transport information *****

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	Land transport ADR/RID ***	Marine transport IMDG/GGVSee ***	Air transport ICAO/IATA ***
Tunnel restriction code	-		
14.1. UN number	3077	3077	3077
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide)
14.3. Transport hazard class(es)	9	9	9
Label			
14.4. Packing group	III	III	III
Limited Quantity	5 kg		
Transport category	3		
14.5. Environmental hazards	 ENVIRONMENTALLY HAZARDOUS	Marine Pollutant 	 ENVIRONMENTALLY HAZARDOUS

SECTION 15: Regulatory information ***

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

Major-accident categories acc. 96/82/EC

Category 9.1 Dangerous for environment

Water Hazard Class (Germany) ***

Water Hazard Class WGK 2

(Germany)

Remarks Derivation of WGK according to Annex 1 No. 5.2 AwSV

15.2. Chemical safety assessment

For this substance a chemical safety assessment has been carried out.

SECTION 16: Other information

Hazard statements listed in Chapter 3

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

CLP categories listed in Chapter 3

Aquatic Acute 1 Hazardous to the aquatic environment, acute, Category 1

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Aquatic Chronic 1

Hazardous to the aquatic environment, chronic, Category 1

Supplemental information

Relevant changes compared with the previous version of the safety data sheet are marked with: ***
This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.