



Safety Data Sheet

acc. to OSHA HCS

Printing date: 03/26/2024

Version 1

Reviewed on: 03/26/2024

1 Identification

- **Product identifier**
- **Product name:** LP-V01-11-00
- **Trade names:**
ZnS/5P
- **Chemical Identification:** Zinc sulphide
- **CAS Number:**
1314-98-3
- **EC number:**
215-251-3
- **REACH-Registration number:** Zinc sulphide: 01-2119475779-15-0004
- **Application of the substance / the preparation:**
The substance is used for the production of inorganic phosphors.
- **Uses advised against** Do not use for private purposes (household).
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Leuchtstoffwerk Breitung GmbH
Lange Sömme 17
D-98597 Breitung
Tel.: +49-(0)36848-840
Telefax: +49-(0)36848-8490
Email: info@leuchtstoffwerk.com
Website: www.leuchtstoffwerk.com
- **Information department:** info@leuchtstoffwerk.com
- **Emergency telephone number:**
DE: +49-(0)361 730 730 24h emergency number GGIZ
CHEMTREC - USA / CA (24-h emergency number): +1 800 424 9300

2 Hazard(s) identification

- **Classification of the substance or mixture**
The substance is not classified, according to the Globally Harmonized System (GHS).
- **Label elements**
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Precautionary statements**
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P262 Do not get in eyes, on skin, or on clothing.
P264 Wash hands and face thoroughly after handling.
P281 Use personal protective equipment as required.
P285 In case of inadequate ventilation wear respiratory protection.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.

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- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**
1314-98-3 zinc sulphide
- **Identification number(s)**
- **EC number:** 215-251-3

4 First-aid measures

- **Description of first aid measures**



- **General information:**
Take off immediately all contaminated clothing and wash it before reuse.
Seek medical treatment in case of complaints.
- **After inhalation:**
Supply fresh air or oxygen; call for doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
Protect unharmed eye.
- **After swallowing:**
If swallowed, rinse mouth with water (only if the person is conscious).
Drink plenty of water and provide fresh air.
Do not induce vomiting.
Call a doctor immediately.
- **Information for doctor:** Treat symptomatically.
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
The product is not flammable.
Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Sulphur dioxide (SO₂)
Sulfur oxides (SO_x)
- **Advice for firefighters**
- **Protective equipment:**
Wear fully protective equipment.
Do not inhale explosion gases or combustion gases.
Wear self-contained respiratory protective device.

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- **Additional information:**
 Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

- Wear protective clothing.
- Avoid contact with the eyes and skin.
- Avoid formation of dust.
- Use respiratory protective device against the effects of fumes/dust/aerosol.
- Ensure adequate ventilation

- **Environmental precautions:** Avoid release to the environment.

- **Methods and material for containment and cleaning up:**

- Avoid formation of dust.
- Pick up mechanically.
- Send for recovery or disposal in suitable receptacles.
- Dispose of the collected material according to regulations.
- Ensure adequate ventilation.

- **Reference to other sections**

- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

- **Protective Action Criteria for Chemicals**

- **PAC-1:**

1314-98-3	zinc sulphide	8.9 mg/m ³
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- **PAC-2:**

1314-98-3	zinc sulphide	99 mg/m ³
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- **PAC-3:**

1314-98-3	zinc sulphide	590 mg/m ³
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7 Handling and storage

- **Handling:**

- **Precautions for safe handling**

- Wear protective clothing.
- Avoid contact with the eyes and skin.
- Prevent formation of dust.
- Any deposit of dust which cannot be avoided must be regularly removed.
- Provide suction extractors if dust is formed.
- Use respiratory protective device against the effects of fumes/dust/aerosol.
- Ensure good ventilation/exhaustion at the workplace.
- The usual precautionary measures for handling chemicals should be followed.

- **Information about protection against explosions and fires:** The product is not flammable.

- **Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:**

- Store receptacle in a well ventilated area.
- Keep receptacle tightly sealed.
- Use only receptacles specifically permitted for this substance/product.

- **Information about storage in one common storage facility:** Do not store together with acids.

- **Further information about storage conditions:**

- Protect from heat and direct sunlight.
- Protect from humidity and water.
- Store in a cool place.
- Store in dry conditions.

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- Protect from frost.
- **Storage class:** 13 - TRGS 510
- **Specific end use(s)** see section 1.2

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.

· PNECs

1314-98-3 zinc sulphide

PNEC freshwater	20.6 µg/l (-)
PNEC marine water	6.1 µg/l (-)
PNEC STP	52 µg/l (-)
PNEC soil	106.8 mg/kg dw (-)
PNEC sediment (freshwater)	235.6 mg/kg dw (-)
PNEC sediment (marine water)	113 mg/kg dw (-)

- **Additional information:** The lists that were valid during the creation were used as basis.

· Exposure controls

· Personal protective equipment:

· General protective and hygienic measures:

Avoid contact with the eyes and skin.

Do not eat, drink, smoke or sniff while working.

The usual precautionary measures for handling chemicals should be followed.

Immediately remove all soiled and contaminated clothing.

· Breathing equipment:



Use respiratory protective device when working with dust.

Use suitable respiratory protective device when high concentrations are present.

· Recommended filter device for short term use:

Filter P2

Filter FFP2

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· Penetration time of glove material

Value for the permeation: Level ≥ 480 min. (EN 374)

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Not suitable are gloves made of the following materials:** Strong gloves

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· **Eye protection:**

Safety glasses

· **Body protection:** Protective work clothing

9 Physical and chemical properties

· **Information on basic physical and chemical properties**· **General Information**· **Appearance:**

· Form:	Solid Powder
· Color:	Yellowish White
· Odor:	Odorless
· Odor threshold:	Not applicable

· pH-value:	7
· Melting point/Melting range:	>800 °C (>1,472 °F)
· Boiling point/Boiling range:	Undetermined.

· Flash point:	Not applicable
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· Flammability (solid, gaseous):	Product is not flammable.
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· Decomposition temperature:	>500 °C (>932 °F)
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· Ignition temperature:	Not applicable
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· Danger of explosion:	Product does not present an explosion hazard.
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· **Explosion limits:**

· Lower:	Not applicable
· Upper:	Not applicable

· Oxidizing properties	Not determined
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· Vapor pressure:	Not applicable.
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· Density at 20 °C (68 °F):	4.13 g/cm ³ (34.46485 lbs/gal)
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· Bulk density:	1,400 kg/m ³
· Relative density	Not determined.
· Vapor density	Not applicable.
· Evaporation rate	Not applicable.

· Solubility in / Miscibility with Water at 25 °C (77 °F):	<0.01 g/l Insoluble.
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· Partition coefficient (n-octanol/water):	Not determined.
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· **Viscosity:**

· Dynamic:	Not applicable.
· Kinematic:	Not applicable.
· Granulometry (Particle size distribution):	2-10 µm (d50)

· Other information	No further relevant information available.
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10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** Thermal decomposition starts at >500 °C.
- **Possibility of hazardous reactions**
 Reacts with acids.
 Reacts with acids forming hydrogen sulfide.
 Thermal decomposition starts at >500 °C.
- **Conditions to avoid** Keep away from acids.
- **Incompatible materials:** Acid.
- **Hazardous decomposition products:**
 In case of fire, the following can be released:
 Sulfur dioxide
 Sulfur oxides (SO_x)
 Hydrogen sulphide is formed in contact with acids.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**

1314-98-3 zinc sulphide

Oral	LD50	>2,000 mg/kg (-)
Inhalative	LC50/4 h	>5.7 mg/l (-)

- **Specific symptoms in biological assay:**
- **on the skin:**
 No irritant effect.
 Based on available data, the classification criteria are not met.
- **Other information (about experimental toxicology):** Warning, substance not yet fully tested
- **Additional toxicological information:**
 When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
 The substance is not subject to classification.
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)** Substance is not listed.
- **NTP (National Toxicology Program)** Substance is not listed.
- **OSHA-Ca (Occupational Safety & Health Administration)** Substance is not listed.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
 Based on available data the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **AOX-indication:** The product does not contain organically bound halogens (AOX-free).
- **General notes:** Not hazardous for water.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Disposal must be made according to official regulations.
Depending on the intended use by the customer, the waste code number must be checked with the responsible disposal company and adjusted if necessary.
- **Uncleaned packagings:**
- **Recommendation:**
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.
Packagings that cannot be cleansed are to be disposed of in the same manner as the product.
Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|--|--|
| · UN-Number | |
| · DOT, ADR/RID/ADN, IMDG, IATA | Void |
| · UN proper shipping name | |
| · DOT, ADR/RID/ADN, IMDG, IATA | Void |
| · Transport hazard class(es) | |
| · DOT, ADR/RID/ADN, ADN, IMDG, IATA | |
| · Class | Void |
| · Packing group | |
| · DOT, ADR/RID/ADN, IMDG, IATA | Void |
| · Environmental hazards: | None |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · Transport/Additional information: | Not dangerous according to the above specifications. |
| · UN "Model Regulation": | Void |

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**
- **Section 302 (extremely hazardous substances):** Substance is not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is listed.

· **TSCA (Toxic Substances Control Act):**

zinc sulphide

ACTIVE

- **Hazardous Air Pollutants** Substance is not listed.
- **Proposition 65**
- **Chemicals known to cause cancer:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.

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- **Chemicals known to cause developmental toxicity:** Substance is not listed.
- **New Jersey Right-to-Know List:** Substance is not listed.
- **New Jersey Special Hazardous Substance List:** Substance is not listed.
- **Pennsylvania Right-to-Know List:** Substance is not listed.
- **Pennsylvania Special Hazardous Substance List:** Substance is not listed.
- **Carcinogenicity categories**

· EPA (Environmental Protection Agency) - Integrated Risk Information System (IRIS)		
1314-98-3	zinc sulphide	D, I, II

- **TLV (Threshold Limit Value)** Substance is not listed.
- **MAK (German Maximum Workplace Concentration)** Substance is not listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
- **Canadian substance listings:**
- **Canadian Domestic Substances List (DSL)** Substance is listed.
- **Canadian Non-Domestic Substances List (NDSL)** Substance is not listed.
- **Canadian Ingredient Disclosure list (limit 0.1%)** Substance is not listed.
- **Canadian Ingredient Disclosure list (limit 1%)** Substance is not listed.
- **Philippines Inventory of Chemicals and Chemical Substances** Substance is listed.
- **Chinese Chemical Inventory of Existing Chemical Substances** Substance is listed.
- **Australian Inventory of Chemical Substances** Substance is listed.

· Korean Existing Chemical Inventory		
1314-98-3	zinc sulphide	KE-35583

- **Standard for the Uniform Scheduling of Drugs and Poisons** Substance is not listed.
- **New Zealand Inventory of Chemicals** Substance is listed.

· Existing and New Chemical List (Japan)		
1314-98-3	zinc sulphide	1-572

- **National regulations:** OSHA Hazard Communication Standard
- **Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

16 Other information

"Although LEUCHTSTOFFWERK BREITUNGEN GMBH has attempted to provide current and accurate information herein, LEUCHTSTOFFWERK BREITUNGEN GMBH makes no representations regarding the accuracy or completeness of the information and assumes no liability for any loss, damage, injury of any kind which may result from or arise out of the use of or reliance on the information by any person. Furthermore existing laws and directions have to be respected by the receiver of the product on his own responsibility".

- **Department issuing SDS:**
Health, Safety, Environment and Quality Management
Chemical Management

- **Contact:**

- **Date of preparation / last revision** 03/26/2024

- **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 EINECS: European Inventory of Existing Commercial Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 PNEC: Predicted No-Effect Concentration (REACH)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 NIOSH: National Institute for Occupational Safety
 OSHA: Occupational Safety & Health
 TLV: Threshold Limit Value

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PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit

· * **Data compared to the previous version altered.**

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