

Not a hazardous substance or mixture.

Other hazards which do not result in classification

AUH031 Contact with acids liberates toxic gas

[Q2] Precautionary statement – Prevention: P233 Keep container tightly closed.

SECTION 3: Composition/information on ingredients

Mixtures

Molecular weight: 97.43

[00] Information on Composition: Exists in two crystalline forms;; alpha - wurtzite;; beta - sphalerite.

Components

Component	CAS no.	Concentration
Zinc sulfide (EC no.: 215-251-3)	1314-98-3	100 % (weight)
CLASSIFICATIONS: No data available. HAZARDS: No data available.		

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice	First Aid Facilities: Maintain eyewash fountain in work area.
If inhaled	If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.
In case of skin contact	Wash affected areas with copious quantities of water immediately. Remove contaminated clothing and wash before re-use. Seek medical advice.
In case of eye contact	Irrigate with copious quantity of water for 15 minutes. Seek medical assistance if symptoms persist.
If swallowed	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.

Most important symptoms/effects, acute and delayed

The following applies to zinc compounds in general: only slightly absorbable via the gastrointestinal tract. Adstringent effect on mucous membranes. Metal-fume fever after inhalation of large quantities. Causes drowsiness.

Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically based on judgement of doctor and individual reactions of the patient.

For advice in an emergency, contact a Poisons Information Centre (Phone Australia 131 126) or a doctor.

SECTION 5: Fire-fighting measures

Suitable extinguishing media

Use fire extinguishing media appropriate for surrounding environment. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Specific hazards arising from the chemical

Material does not burn. Runoff may pollute waterways

Special protective actions for fire-fighters

Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. Fight fire from safe location.

Further information

Non-combustible.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective clothing specified for normal operations (see Section 8)

Methods and materials for containment and cleaning up

Sweep up (avoid generating dust) and remove to a suitable, clearly labelled container for disposal in accordance with local regulations.

SECTION 7: Handling and storage

Precautions for safe handling

Ensure adequate ventilation. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation. Avoid dust formation. dust is formed. For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry place. Store in well ventilated area. Store away from acids. Store away from oxidizing agents. Keep containers closed at all times.

SECTION 8: Exposure controls/personal protection

Appropriate engineering controls

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Skin protection

Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance.

Body protection

Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Respiratory protection

Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or

Safety Data Sheet

ZINC SULFIDE

SDS no. 3KGUK1N3 • Date of issue: 2023-11-10

planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Solid
Appearance	Yellowish-white powder.
Color	No data available.
Odor	Odourless.
Odor threshold	No data available.
Melting point/freezing point	Changes to alpha (wurtzite) form at 1020 °C.
Boiling point or initial boiling point and boiling range	No data available.
Flammability	No data available.
Lower and upper explosion limit/flammability limit	No data available.
Flash point	No data available.
Explosive properties	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Oxidizing properties	No data available.
pH	~5.0 - 5.5 (50 g/l, H ₂ O, 20 °C)
Kinematic viscosity	No data available.
Solubility	Solubility in Water: Insoluble. Solubility in Organic Solvents: Soluble in acids.
Partition coefficient n-octanol/water (log value)	No data available.
Vapor pressure	No data available.
Evaporation rate	No data available.
Density and/or relative density	Specific Gravity: alpha (wurtzite): 3.98, B (sphalerite): 4.102
Relative vapor density	No data available.
Particle characteristics	No data available.

Supplemental information regarding physical hazard classes

No data available.

Further safety characteristics (supplemental)

Other Information: Sublimation point: 1180 °C

SECTION 10: Stability and reactivity

Reactivity

Stable under normal conditions of storage and handling.

Chemical stability

Stable if kept dry. Air and moisture sensitive.

Possibility of hazardous reactions

Reacts with water and acids evolving toxic hydrogen sulfide gas.

Hazardous Polymerization: Will not occur.

Conditions to avoid

Safety Data Sheet

ZINC SULFIDE

SDS no. 3KGUK1N3 • Date of issue: 2023-11-10

Exposure to moisture.

Avoid storing in direct sunlight and avoid extremes of temperature.

Incompatible materials

Water, acids and oxidisers.

Hazardous decomposition products

Hydrogen sulfide and sulfur oxides.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Ingestion: May be harmful by ingestion. Liberates highly toxic hydrogen sulfide in contact with gastric juices.

Inhalation: May cause irritation to respiratory system.

Skin corrosion/irritation

May cause irritation to skin.

Serious eye damage/irritation

May cause irritation to eyes.

Respiratory or skin sensitization

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

No data available.

Reproductive toxicity

No data available.

Summary of evaluation of the CMR properties

No data available.

Specific target organ toxicity (STOT) - single exposure

No data available.

Specific target organ toxicity (STOT) - repeated exposure

No data available.

Aspiration hazard

No data available.

Additional information

Zinc sulfide: rat LC50 inhalation > 5040mg/m³/4H (5040mg/m³) LUNGS, THORAX, OR RESPIRATION: OTHER CHANGES

SKIN AND APPENDAGES (SKIN): HAIR: OTHER Research and Consulting Company, Technical Reports. Vol. NOTOX1072, Pg. 1989, rat LD50 oral > 2gm/kg (2000mg/kg) Research and Consulting Company, Technical Reports. Vol. NOTOX1072/1332, Pg. 1989, rat LD50 skin > 2gm/kg (2000mg/kg) Research and Consulting Company, Technical Reports. Vol. NOTOX1072/1333, Pg. 1989,

SECTION 12: Ecological information

Toxicity

No data available.

Persistence and degradability

No data available.

Bioaccumulative potential

No data available.

Mobility in soil

No data available.

Results of PBT and vPvB assessment

No data available.

Endocrine disrupting properties

No data available.

Other adverse effects

No data available.

SECTION 13: Disposal considerations

Disposal methods

Product disposal

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

Other disposal recommendations

Do not discharge this material into waterways, drains and sewers.

SECTION 14: Transport information

ADG (Road and Rail)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Safety Data Sheet

ZINC SULFIDE

SDS no. 3KGUK1N3 • Date of issue: 2023-11-10

Australia SUSMP

Poison Schedule: NS

Canadian Domestic Substances List (DSL)

Chemical name: Zinc sulfide (ZnS)

CAS: 1314-98-3

SECTION 16: Other information

Further information/disclaimer

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Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia

National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'

Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.

Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.

Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants, December 2019

Safe Work Australia, Hazardous Chemical Information System (HCIS), hcis.safeworkaustralia.gov.au

IATA, Dangerous Goods Regulations (DGR)

IMO, International Maritime Dangerous Goods Code (IMDG)