

Safety Data Sheet

Cosmic Dust

CAROLINA[®]
www.carolina.com

Section 1

Product Description

Product Name: Cosmic Dust
Recommended Use: Science education applications
Synonyms: Zinc Sulfide Phosphor
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2

Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

WARNING



Harmful if swallowed. Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

GHS Classification:

Hazardous to the aquatic environment - Acute Category 3, Hazardous to the aquatic environment - Chronic Category 3, Acute Toxicity - Oral Category 4

Section 3

Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Zinc Sulfide	1314-98-3	98
Zinc Oxide	1314-13-2	1.5
Copper (II) Chloride, Dihydrate	10125-13-0	0.5

Section 4

First Aid Measures

Emergency and First Aid Procedures

Inhalation: In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin Contact: After contact with skin, wash immediately with plenty of water.
Ingestion: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Section 5

Firefighting Procedures

Extinguishing Media: Use media suitable to extinguish surrounding fire.
Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards: Fire or excessive heat may produce hazardous decomposition products.
Hazardous Combustion Products: Sulfur containing gases, Zinc Oxides

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Section 6 Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled:

Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill. Avoid dusting. Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

Section 7 Handling and Storage

Handling: Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment.

Storage: Keep container tightly closed in a cool, well-ventilated place.

Storage Code: Green - general chemical storage

Section 8 Protection Information

Chemical Name	ACGIH		OSHA PEL	
	(TWA)	(STEL)	(TWA)	(STEL)
Zinc Sulfide	N/A	N/A	N/A	N/A
Zinc Oxide	2 mg/m ³ TWA (respirable fraction)	10 mg/m ³ STEL (respirable fraction)	5 mg/m ³ TWA (fume); 15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)	N/A
Copper (II) Chloride, Dihydrate	1 mg/m ³ TWA (dust and mist, as Cu)	N/A	N/A	N/A

Control Parameters

Engineering Measures:

Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.

Personal Protective Equipment (PPE): Respiratory Protection:

Lab coat, apron, eye wash, safety shower.
Respiratory protection may be required to avoid overexposure when handling this product. General or local exhaust ventilation is the preferred means of protection. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms.

Eye Protection:

Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection:

Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves:

No information available

Section 9 Physical Data

Formula: N/A

Molecular Weight: No data available

Appearance: Yellow Green Powder

Odor: No data available

Odor Threshold: No data available

pH: No data available

Melting Point: No data available

Boiling Point: No data available

Flash Point: No data available

Flammable Limits in Air: No data available

Vapor Pressure: No data available

Evaporation Rate (BuAc=1): No data available

Vapor Density (Air=1): No data available

Specific Gravity: 4.1

Solubility in Water: Practically Insoluble

Log Pow (calculated): No data available

Autoignition Temperature: No data available

Decomposition Temperature: No data available

Viscosity: No data available

Percent Volatile by Volume: No data available

Section 10 Reactivity Data

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Reactivity: Not generally reactive under normal conditions.
Chemical Stability: Stable under normal conditions.
Conditions to Avoid: Exposure to moisture
Incompatible Materials: Strong acids, Iodine Monochloride, Water, Chlorinated compounds, Rubber, Magnesium
Hazardous Decomposition Products: Zinc Oxides, Sulfur containing gases
Hazardous Polymerization: Will not occur

Section 11 Toxicity Data

Routes of Entry Inhalation and ingestion.
Symptoms (Acute): Respiratory Irritation, Nausea, Vomiting, Headache, Depressed Activity
Delayed Effects: No data available

Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Zinc Sulfide	1314-98-3	Oral LD50 Rat > 2000 mg/kg	Dermal LD50 Rat > 2000 mg/kg	INHALATION LC50 Rat > 5040 MG/M3
Zinc Oxide	1314-13-2	Oral LD50 Mouse 7950 mg/kg		INHALATION LC50 Mouse 2500 MG/M3
Copper (II) Chloride, Dihydrate	10125-13-0	Oral LD50 Rat 140 mg/kg Oral LD50 Mouse 233 mg/kg Oral LD50 Rat 584 mg/kg Oral LD50 Mouse 110 mg/kg		

Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
Zinc Sulfide	1314-98-3	Not listed	Not listed	Not listed
Zinc Oxide	1314-13-2	Not listed	Not listed	Not listed
Copper (II) Chloride, Dihydrate	10125-13-0	Not listed	Not listed	Not listed

Chronic Effects:

Mutagenicity: No evidence of a mutagenic effect.
Teratogenicity: No evidence of a teratogenic effect (birth defect).
Sensitization: No evidence of a sensitization effect.
Reproductive: No evidence of negative reproductive effects.
Target Organ Effects:
Acute: Lungs
Chronic: No data available

Section 12 Ecological Data

Overview: Moderate ecological hazard. This product may be dangerous to plants and/or wildlife.
Mobility: No data
Persistence: No data
Bioaccumulation: No data
Degradability: No data
Other Adverse Effects: No data

Chemical Name	CAS Number	Eco Toxicity
Zinc Sulfide	1314-98-3	Aquatic LC50 (96h) Fathead Minnow 1826 MG/L Aquatic LC50 (48h) Daphnia 970 MG/L

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Zinc Oxide	1314-13-2	Aquatic LC50 (96h) Bluegill Sunfish > 320 ppm Aquatic LC50 (96h) Rainbow Trout 1.1 MG/L
Copper (II) Chloride, Dihydrate	10125-13-0	Aquatic EC50 (48h) Daphnia 0.098 MG/L Aquatic LC50 (96h) Rainbow Trout 286 ul/l

Section 13 Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.

Waste Disposal Code(s): Not Determined

Section 14 Transport Information

Ground - DOT Proper Shipping Name: Not regulated for transport by US DOT.

Air - IATA Proper Shipping Name: Not regulated for air transport by IATA.

Section 15 Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Zinc Sulfide	1314-98-3	No	No	No	No	No
Zinc Oxide	1314-13-2	No	No	No	No	No
Copper (II) Chloride, Dihydrate	10125-13-0	No	No	No	No	No

Section 16 Additional Information

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The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health