

1. IDENTIFICATION

1.1 PRODUCT IDENTIFIERS

Product Name: Zinc Sulphide / Zinc Sulfide
Synonyms, Trade Names: CVD Zinc Sulfide
Zinc Sulfide Cleartran® (Trademark of Dow Chemicals)

1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE

Identified Uses: Optical material for manufacturing of Optical Components

1.3 DETAILS OF SUPPLIER OF THE SAFETY DATA SHEET

Company: American Photonics, Inc.
6621 19th Street East
Sarasota, FL 34243
(941) 752-5811

1.4 EMERGENCY TELEPHONE NUMBER

Emergency Phone: (941) 752-5811
Emergency Action: In the event of a medical enquiry involving this product, please contact your doctor or local hospital accident and emergency department.

2. HAZARDOUS IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE



Irritant

Eye irritation and skin sensitization

2.2 LABEL ELEMENTS

H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.

PRECAUTIONARY STATEMENTS:

P262 Do not breathe dust / fumes/ gas / mist / vapors / spray.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when handling this product.
H400 Very toxic to aquatic life.

RESPONSE:

P301+P310 IF SWALLOWED: Immediately call a poison center or doctor.
P304+P312 IF INHALED: Call a poison center or doctor / physician if you feel unwell.

2.3 OTHER HAZARDS

Combustible dust

Health	1
Flammability	0
Physical Hazard	0
Personal Protection	B




3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 SUBSTANCES

Component Name	CAS Number	Percentages are by weight
CVD ZINC SULFIDE Cleartran®	1314-98-3	>99%

4. FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

GENERAL: Consult a doctor for specific advice.

EYES: Irrigate thoroughly with water for at least 15 minutes. If discomfort persists, obtain medical attention.

SKIN: Wash thoroughly with soap and water for at least 15 minutes. Dry area with clean towel. Remove contaminated clothing and wash clothing before re-use.

INHALATION: Move exposed to fresh air. Obtain medical attention.

INGESTION: Do not induce vomiting. Wash out mouth thoroughly with water and give 2 cups of water to drink. Do not give carbonated drinks. Obtain medical attention immediately.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Refer to Section 2.2 and to Section 11

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

If seeking medical attention, provide SDS document to physician.

5. FIRE FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

This product does not burn.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

May evolve toxic fumes in fire, decomposing at temperatures greater than 400° C in air. At temperatures greater than 800° C in inert atmosphere, the material sublimates into zinc and sulphur fumes.



5.3 ADVICE FOR FIREFIGHTERS

Use breathing apparatus if necessary.

5.4 ADDITIONAL INFORMATION

None

6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Wear suitable protective clothing & equipment as listed under Section 8. Avoid making dust.

6.2 ENVIRONMENTAL PRECAUTIONS

Prevent further leakage or spillage. Do not let product enter drains. Do not discharge to the environment.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

Take up and containerize for proper disposal. Containerize any cleaning materials used for proper disposal.



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6.4 REFERENCE TO OTHER SECTIONS

Dispose as in Section 13.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING:

Keep away from heat. Avoid contact with skin and eyes. Protect against physical damage.
Avoid generating dust.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Store away from incompatible materials. Keep away from food and beverages.
Keep away from acids and strong bases.

7.3 SPECIFIC END USES

The identified uses for this product are detailed in Section 1.2

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

**OCCUPATIONAL EXPOSURE LIMITS (OEL): 10mg/m³ Total particulates, long term, 8 hour
Time Weighted Average (TWA).**

8.2 EXPOSURE CONTROLS

Protective gloves made of PVA are required. Use of a laboratory coat is suggested. Safety goggles or safety glasses with side shields are required if there is any possibility of chipping or dust creation. Respirators must be worn when the threshold limit is exceeded. Provide adequate general mechanical ventilation, and local exhaust ventilation. Wash hands immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear white translucent shapes.
ODOR:	No Odor
BOILING POINT:	(760mm Hg) Sublimes
MELTING POINT:	1830°C (3326°F) - 1185°C (2165°F) Sublimes*
AUTO/SELF-IGNITE TEMP:	Not Determined
FLASH POINT:	Not Determined
FLAMMABILITY:	Not Determined
RELATIVE DENSITY:	4.08 g/mL
SOLUBILITY IN WATER:	Insoluble
pH-value:	Not Determined
Explosive Properties:	Not applicable

9.2 OTHER SAFETY INFORMATION

*Oxidizes at 300°C (572°F), exhibits plastic deformation at 500°C (932°F) and dissociates at about 700°C (1292°F).



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10. STABILITY AND REACTIVITY

10.1 REACTIVITY:

Reacts with strong mineral acids and strong oxidizing materials.

10.2 CHEMICAL STABILITY

Stable under normal conditions of storage and use.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

None under normal conditions

10.4 CONDITIONS TO AVOID:

Can react with oxidizing agents. Avoid strong acids.

10.5 INCOMPATIBLE MATERIALS:

Strong mineral acids. Strong oxidizing materials.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS:

Decomposition product is Hydrogen Sulfide gas.

11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION OF TOXICOLOGICAL EFFECTS

Harmful by ingestion and inhalation of dust, with a cumulative effect. Particular care must be exercised when machining and creating dust or particules. Inhalation of dust may irritate respiratory system.

ORAL: LD50 >15000 mg/kg

CARCINOGENICITY: No evidence of carcinogenic properties.

MUTAGENICTY/TERATOGENICITY: No evidence of reproductive effects.

CORROSION IRRITATION: Dust is irritating to the respiratory tract. Inhalation of fumes may cause metal fume fever, which is characterized by flu-like symptoms with metallic taste, fever, chills, cough, weakness, chest pain, muscle pain and increased white blood cell count.

12. ECOLOGICAL INFORMATION

12.1 TOXICITY: No environmental hazard anticipated.

12.2 PERSISTENCE AND DEGRADABILITY No data

12.3 BIOACCUMULATIVE POTENTIAL: No data

12.4 MOBILITY IN SOIL: No data

12.5 OTHER ADVERSE EFFECTS: None known

13. DISPOSAL CONSIDERATIONS

13.1 Chemical residues are generally classified as special waste and are covered by regulations which vary according to location. Contact your local waste disposal authority for advice, or pass to a chemical disposal company.



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14. TRANSPORT INFORMATION

- 14.1 UN NUMBER:
- 14.2 UN PROPER SHIPPING NAME:
- 14.3 TRANSPORT HAZARD CLASS(ES):
- 14.4 PACKING GROUP:
- 14.5 ENVIRONMENTAL HAZARDS:
- 14.6 TRANSPORT IN BULK:
- 14.7 SPECIAL PRECAUTIONS FOR USER:

15. REGULATORY INFORMATION

15.1 UNITED STATES (US)

SARA Section 311/312 (Specific toxic chemical listings):

None of the ingredients are listed or exempt.

SARA Section 313 (Specific toxic chemical listings):

1314-98-3 Zinc Sulfide (listed under Zinc Compounds)

RCRA (Hazardous waste code):

None of the ingredients are listed or exempt.

TSCA (Toxic Substances Control Act):

All ingredients are listed

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)

None of the ingredients are listed or exempt.

15.2 PROPOSITION 65 (California)

Chemicals known to cause cancer:	None of the ingredients is listed.
Chemicals known to cause reproductive toxicity for females:	None of the ingredients is listed.
Chemicals known to cause reproductive toxicity for males:	None of the ingredients is listed.
Chemicals known to cause developmental toxicity:	None of the ingredients is listed.

16. OTHER INFORMATION

- 16.1 The above information is believed to be correct, but does not purport to be all inclusive and must be used only as a guide.
- 16.2 REVISION DATE: 03.23.2020