

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Trade Name:** Silver Doped Zinc Sulfide

**Chemical Formula:** ZnS:Ag

**Manufacturer Item Number:** ZI-5942

**Manufacturer:** Lorad Chemical Corporation  
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Saint Petersburg, Florida, 33713  
United States of America

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### 2. HAZARD IDENTIFICATION

**Signal Word:** Warning

**Pictograms:**



**Hazard Statements:** H317 May cause an allergic skin reaction.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Precautionary Statements:** P261 Avoid breathing dust / fume / gas / mist / vapors / spray.  
P272 Contaminated work clothing must not be allowed out of the workplace.  
P280 Wear eye protection / face protection / protective gloves.  
P284 Wear respiratory protection.  
P302+352 IF ON SKIN: Wash with plenty of soap and water.  
P304+340+312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.  
P333+313 If skin irritation or rash occurs: Get medical advice / attention.  
P342+311 If experiencing respiratory symptoms: Call a POISON CENTER or physician.  
P363 Wash contaminated clothing before reuse.  
P501 Dispose of content / container in accordance with local, regional, national, provincial, territorial, and international regulations.

**HMIS Health Ratings (0-4)**

- Health: 1  
- Flammability: 0  
- Physical: 0

### 3. COMPOSITION

**Additional Names:** No Data Available

**Percentage:** 100 wt%

**CAS #:** 68611-71-2

EC #: 271-905-8

**4. FIRST AID PROCEDURES**

<b>General Treatment</b>	Consult a physician. Show this SDS to the doctor in attendance. Move out of dangerous area.
<b>Special Treatment:</b>	No Data Available.
<b>Important Symptoms:</b>	May cause irritation to upper respiratory tract and coughing, allergy or asthma symptoms if inhaled, or allergic skin reaction if prolonged contact with skin.
<b>Inhalation:</b>	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
<b>Ingestion:</b>	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
<b>Skin:</b>	Wash off with soap and plenty of water. Consult a physician.
<b>Eyes:</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult a physician.

**5. FIREFIGHTING MEASURES**

<b>Flammability:</b>	Not Flammable.
<b>Special Hazards from Substance:</b>	Sulphur oxides, Zinc oxides, reaction with strong acids liberates Hydrogen sulfide gas
<b>Extinguishing Media:</b>	Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.
<b>Special Fire Fighting Procedures:</b>	Wear self-contained breathing apparatus for firefighting if necessary.

**6. ACCIDENTAL RELEASE MEASURES**

<b>If Material is Released / Spilled:</b>	Avoid dust formation. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Sweep up or vacuum up spillage and collect in suitable container for disposal. Dispose of waste in accordance with applicable federal, state, local, and provincial environmental regulations.
<b>Environmental Precautions:</b>	Prevent further leakage or spills if safe to do so. Do not allow to enter drains, sewers, or watercourses.

**7. HANDLING AND STORAGE**

<b>Handling Conditions:</b>	Maintain good housekeeping procedures to prevent accumulation of dust. Avoid transfer methods which produce free dust distribution in the work area. If dust accumulation occurs, it should be eliminated periodically.
<b>Storage Conditions:</b>	Air and moisture sensitive. Keep in a dry place.
<b>Work / Hygienic Maintenance:</b>	Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking, and again when leaving work. Wash hands and forearms thoroughly after handling.
<b>Ventilation:</b>	Keep container tightly closed in a dry and well-ventilated place.

**8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**

Permissible Exposure Limits:	Authority	Basis	Limit	Remarks
	-	-	-	Contains no substances with occupational exposure limit values.
Threshold Limit Value:	Authority	Basis	Limit	Remarks
	-	-	-	Contains no substances with occupational exposure limit values.
<b>Special Equipment:</b>	No Data Available.			
<b>Respiratory Protection:</b>	Respiratory protection is not required. Where protection from nuisance levels of dust are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).			
<b>Protective Gloves:</b>	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.			
<b>Eye Protection:</b>	Safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).			
<b>Body Protection:</b>	Wear appropriate protective clothing.			

**9. PHYSICAL AND CHEMICAL CHARACTERISTICS**

<b>Color:</b>	White
<b>Forms:</b>	Powder
<b>Odor:</b>	Odorless
<b>Water Solubility:</b>	No Data Available.
<b>Boiling Point:</b>	No Data Available.
<b>Melting Point:</b>	>1,850°C (>3,362°F)
<b>Flash Point:</b>	No Data Available.
<b>Autoignition Temperature:</b>	No Data Available.
<b>Density:</b>	4.09 g/cm <sup>3</sup>
<b>Molecular Weight:</b>	205.32 g/mol

**10. REACTIVITY**

<b>Stability:</b>	Stable under recommended storage conditions.
<b>Reacts with:</b>	Strong oxidizing agents, strong acids.
<b>Incompatible Conditions:</b>	Oxidizes in area and decomposes in moist air. Contact with strong acids liberates hydrogen sulfide gas.
<b>Hazardous Decomposition Products:</b>	Hydrogen sulfide when in contact with strong acids. Sulfur oxides when exposed to temperatures greater than 500°C.

**11. TOXICOLOGICAL INFORMATION**

<b>Potential Health Effects:</b>	
- Eyes	No Data Available.
- Skin	May cause allergic skin reaction.
- Ingestion	No Data Available.
- Inhalation	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Chronic	No Data Available.
<b>Signs and Symptoms:</b>	No Data Available.
<b>Aggravate Medical Conditions:</b>	No Data Available.
<b>Median Lethal Dose:</b>	No Data Available.
<b>Carcinogen:</b>	NTP: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by NTP.  IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.  OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by OSHA.  ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by ACGIH.

**12. ECOLOGICAL INFORMATION**

<b>Aquatic Toxicity:</b>	No Data Available.
<b>Persistence and degradability:</b>	No Data Available.
<b>Bioaccumulative potential:</b>	No Data Available.
<b>Notes:</b>	Do not allow this material to be released into the environment without proper governmental permits. Do not allow undiluted product or large quantities to reach ground water, water course, or sewage system.

**13. DISPOSAL CONSIDERATIONS**

<b>Disposal:</b>	Offer surplus and non-recyclable solution to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Empty containers should be taken to an appropriate waste handling site for recycling or disposal. Dispose of in accordance with local, state, or national regulations.
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**14. TRANSPORTATION DATA**

<b>Hazardous:</b>	<b>DoT:</b> Not Dangerous Goods. <b>IMDG:</b> Not Dangerous Goods. <b>IATA:</b> Not Dangerous Goods.
<b>Pictogram:</b>	N/A
<b>Hazard Class:</b>	N/A
<b>Packing Group:</b>	N/A
<b>UN Number:</b>	N/A
<b>Proper Shipping Name:</b>	N/A

**15. REGULATORY INFORMATION**

<b>SARA 302 Components</b>	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
<b>SARA 313 Components</b>	This material does not contain any chemical components with known CAS numbers that exceed the threshold (de minimis) reporting levels established by SARA Title III, Section 313.
<b>SARA 311/312 Hazards</b>	No SARA Hazards.
<b>Massachusetts Right to Know Components</b>	No components are subject to the Ma. Right to Know Act.
<b>Pennsylvania Right to Know Components</b>	Silver Doped Zinc Sulfide (CAS No. 68611-71-2)
<b>New Jersey Right to Know Components</b>	Silver Doped Zinc Sulfide (CAS No. 68611-71-2)
<b>California Prop. 65 Components</b>	This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

**16. OTHER INFORMATION**

Copyright 2018 Lorad Chemical Corporation. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document does not constitute a hazard assessment and should not be used in place of the user's own assessment of work place risks as required by other health and safety legislation. The information in this sheet does not represent a guarantee of the properties of the product. Lorad Chemical Corporation and its Affiliates make no warranty with respect to the accuracy of the information or the suitability of this product for any particular application, and shall not be held liable for any damage resulting from handling or from contact with the above product.

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