

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Trade Name:** Yttrium Sulfide

**Chemical Formula:**  $Y_2S_3$

**Manufacturer Item Number:** YT-5820

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

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**Fax:** +1 (727) 826-5510

**Emergency Contact:** (800) 255-3924 (US & Canada)  
+1 (813) 248-0573 (International)

### 2. HAZARD IDENTIFICATION

**Signal Word:** Warning

**Pictograms:**



**Hazard Statements:** H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.

**Precautionary Statements:** P231 Handle under inert gas.  
P233 Keep container tightly closed.  
P261 Avoid breathing dust / fume / gas / mist / vapors / spray.  
P280 Wear protective gloves / protective clothing / eye protection / face protection.  
P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.  
P362 Take off contaminated clothing and wash before reuse.  
P403+233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.  
P501 Dispose of contents / container in accordance with local / regional / national / international regulations.

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

- Health: 2  
- Flammability: 1  
- Physical: 1

### 3. COMPOSITION

**Additional Names:** Yttrium(III) Sulfide; Dyttrium Trisulphide

**Percentage:** 100 wt%

CAS #: 12039-19-9

EC #: 234-887-2

**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>	Causes skin irritation, serious eye irritation, respiratory irritation.
<b>Inhalation:</b>	If breathing, 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. Induce vomiting only if directed by medical personnel. Consult a physician.
<b>Skin:</b>	Wash skin off with plenty of soap and water. Remove contaminated clothing if necessary. If irritation persists, seek medical attention.
<b>Eyes:</b>	Immediately flush eyes with fresh water for at least 15 minutes while holding the eyelids open. Remove contact lenses if worn. Consult a physician.

**5. FIREFIGHTING MEASURES**

<b>Special Hazards from Substance:</b>	Sulfur oxides, Yttrium oxides, or Hydrogen sulfide.
<b>Extinguishing Media:</b>	Use carbon dioxide, sand, or powdered extinguishing agent. DO NOT use water.
<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>	Use personal protective equipment including disposal coveralls. Avoid dust formation. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe area. Do not flush with water or aqueous cleaning agents. Sweep up or vacuum up spillage and collect in suitable closed 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. Discharge into the environment must be avoided.

**7. HANDLING AND STORAGE**

<b>Handling Conditions:</b>	Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes. Avoid prolonged or repeated exposure. Use only in a chemical fume hood. Open and handle container with care.
<b>Storage Conditions:</b>	Store in a tightly closed container in a dry, well ventilated place. Ensure storage is away from water / moisture or oxidizing agents.
<b>Work / Hygienic Maintenance:</b>	Do not eat, drink, or smoke when working with this product. Wear protective gloves and wash skin thoroughly after handling. Keep formation of airborne dusts to a minimum. Guard against dust accumulation. In case of insufficient ventilation, wear suitable respiratory equipment. Sensitive to moisture.
<b>Ventilation:</b>	Keep in well ventilated area.

**8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**

Permissible Exposure Limits:	Authority	Basis	Limit	Remarks
	OSHA	PEL	1.0 mg/m <sup>3</sup>	Yttrium, Table Z-1 - Limit for Air Contaminants
Threshold Limit Value:	Authority	Basis	Limit	Remarks
	ACGIH	TLV	1.0 mg/m <sup>3</sup>	metal and compounds, as Yttrium
	NIOSH	REL	1.0 mg/m <sup>3</sup>	
<b>Special Equipment:</b>	Use proper lab equipment while handling this product. Keep away from incompatible materials for possible risk of hazardous reaction.			
<b>Respiratory Protection:</b>	For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher levels of protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. 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 and face shield. Use equipment for eye protection tested and approved under 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>	Yellow	<b>Molecular Weight:</b>	273.93 g/mol
<b>Forms:</b>	Powder	<b>Density:</b>	3.87 g/cm <sup>3</sup>
<b>Odor:</b>	Rotten Eggs	<b>pH:</b>	No Data Available.
<b>Water Solubility:</b>	No Data Available.	<b>Auto-Ignition Temperature:</b>	No Data Available.
<b>Boiling Point:</b>	No Data Available.	<b>Evaporation Rate:</b>	No Data Available.
<b>Melting Point / Freezing Point:</b>	> 1,925°C (> 3,497°F)	<b>Flammability or Explosive Limits:</b>	No Data Available.
<b>Vapor Pressure:</b>	No Data Available.	<b>Partition Coefficient: n-octanol/ water</b>	No Data Available.
<b>Vapor Density:</b>	No Data Available.	<b>Decomposition Temperature:</b>	No Data Available.
<b>Flash Point:</b>	No Data Available.	<b>Viscosity:</b>	No Data Available.

## 10. REACTIVITY

<b>Stability:</b>	Stable under recommended storage conditions.
<b>Reacts with:</b>	Strong oxidizing agents.
<b>Incompatible Conditions:</b>	Oxidizing agents, Active metals, Mineral acids, Water, Moisture
<b>Hazardous Decomposition Products:</b>	Hydrogen sulfide, Sulfur oxides, Yttrium oxide

## 11. TOXICOLOGICAL INFORMATION

<b>Potential Health Effects:</b>	<p>Eyes: Causes serious eye irritation.</p> <p>Skin: Causes skin irritation.</p> <p>Ingestion: Gastric juices may cause release of toxic Hydrogen sulfide.</p> <p>Inhalation: May cause respiratory tract irritation.</p> <p>Chronic: No Data Available.</p>
<b>Signs and Symptoms:</b>	<p>Yttrium is similar to the lanthanons and may have an anticoagulant effect on blood. Exposure to lanthanons may also lead to sensitivity to heat, itching, increased awareness of odor and taste, and liver damage.</p> <p>Sulfides show variable toxicity. The alkaline sulfides are similar in action to alkalis. They cause irritation of the skin and are corrosive by ingestion. The heavy metal sulfides are generally insoluble and show little toxic action except through the liberation of hydrogen sulfide. Hydrogen sulfide, if generated, is toxic, a severe irritant and flammable. Effects include conjunctivitis, headache, nausea, dizziness, coughing, pulmonary edema, and possibly death.</p>
<b>Aggravate Medical Conditions:</b>	No Data Available.
<b>Median Lethal Dose:</b>	No Data Available.
<b>Carcinogen:</b>	<p>IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable or confirmed human carcinogen by IARC.</p> <p>ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.</p> <p>NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.</p> <p>OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.</p>

## 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>	No Data Available.

## 13. DISPOSAL CONSIDERATIONS

<b>Disposal:</b>	Offer surplus and non-recyclable solutions 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>	<p><b>DoT:</b> Hazardous for Transportation</p> <p><b>IMDG:</b> Hazardous for Transportation</p> <p><b>IATA:</b> Hazardous for Transportation</p>
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Pictogram:



**Hazard Class:** 6.1 Toxic

**Packing Group:** I

**UN Number:** UN3288

**Proper Shipping Name:** **DoT:** toxic solid, inorganic, n.o.s. (Yttrium(III) Sulfide)

**IMDG:** TOXIC SOLID, INORGANIC, N.O.S. (Yttrium(III) Sulfide)  
Marine Pollutant: No

**IATA:** TOXIC SOLID, INORGANIC, N.O.S. (Yttrium(III) Sulfide)

**15. REGULATORY INFORMATION**

**SARA 302 Components** No chemical in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components** This material does not contain any chemical components with known CAS numbers that exceed the threshold (de minimus) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards** No SARA hazard.

**Massachusetts Right to Know Components** No components are subject to the Ma. Right to Know Act.

**Pennsylvania Right to Know Components** Yttrium Sulfide (CAS No. 12039-19-9)

**New Jersey Right to Know Components** Yttrium Sulfide (CAS No. 12039-19-9)

**California Prop. 65 Components** This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any 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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