



LTS Research Laboratories, Inc.
Safety Data Sheet
Yttrium Oxide

1. Product and Company Identification

Trade Name: Yttrium Oxide
Chemical Formula: Y_2O_3
Recommended Use: Scientific research and development

Manufacturer/Supplier: LTS Research Laboratories, Inc.
Street: 2001 Oaks Pkwy
City: Belmont
State: North Carolina
Zip Code: 28012
Country: USA
Tel #: 855-587-2436 / 855-lts-chem

24-Hour Emergency Contact: 800-424-9300 (US & Canada)
+1-703-527-3887 (International)

2. Hazards Identification

Signal Word: Warning



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

Precautionary Statements: P261: Avoid breathing dust/fume/gas/mist/vapors/spray
P264: Wash face, hands, and any exposed skin thoroughly after handling
P271: Use only outdoors or in a well-ventilated area
P280: Wear protective gloves/protective clothing/eye protection/face protection
P362: Take off contaminated clothing and wash before reuse
P302+P350: IF ON SKIN: Gently wash with plenty of soap and water
P304+P312: IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
P332+P313: If skin irritation occurs: Get medical advice/attention
P337+P313: If eye irritation persists get medical advice/attention
P405: Store locked up
P403+P233: Store in a well-ventilated place. Keep container tightly closed
P501: Dispose of contents/container in accordance with local/regional/national/international regulations

HMIS Health Ratings (0-4):	Powder	Bulk
Health:	1	0
Flammability:	0	0
Physical:	1	0

3. Composition

Chemical Family:	Ceramic
Additional Names:	Yttrium(III) oxide, Ytria, diyttrium trioxide, yttrium sesquioxide
Yttrium Oxide (Y ₂ O ₃):	
Percentage:	100 wt%
CAS #:	1314-36-9
EC #:	215-233-5

4. First Aid Procedures

General Treatment:	Seek medical attention if symptoms persist.
Special Treatment:	None
Important Symptoms:	N/A
Inhalation:	Remove victim to fresh air. Supply oxygen if breathing is difficult. Seek medical attention.
Ingestion:	Rinse mouth with water. Do not induce vomiting. Seek medical attention.
Skin:	Wash affected area with mild soap and water. Remove any contaminated clothing. Seek medical attention.
Eyes:	Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention.

5. Firefighting Measures

Flammability:	Non-flammable
Extinguishing Media:	No special restrictions – use suitable extinguishing agent for surrounding material and type of fire. Do not use water for metal fires – use CO ₂ , sand, extinguishing powder.
Spec. Fire Fighting Procedure:	Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

6. Accidental Release Measures

If Material Is Released/Spilled:	Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.
Environmental Precautions:	Isolate runoff to prevent environmental pollution.

7. Handling and Storage

Handling Conditions:	Wash thoroughly after handling.
Storage Conditions:	Store in a cool dry place in a tightly sealed container. Store apart from materials and conditions listed in section 10.
Work/Hygienic Maintenance:	Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.
Ventilation:	Provide sufficient ventilation to maintain concentration at or below threshold limit.

8. Exposure Controls and Personal Protection

Permissible Exposure Limits:	1 mg/m ³ as Y ₂ O ₃ , long-term value
Threshold Limit Value:	1 mg/m ³ as Y ₂ O ₃ , long-term value
Special Equipment:	None
Respiratory Protection:	Dust Respirator
Protective Gloves:	Rubber gloves Check gloves prior to each use
Eye Protection:	Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

9. Physical and Chemical Characteristics

Color:	White
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	0.0007 g/l at 20 °C, slightly soluble
Boiling Point:	N/A
Melting Point:	2410 °C
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	5.01 g/cm ³
Molecular weight:	225.81 g/mol

10. Reactivity

Stability:	Stable under recommended storage conditions
Reacts With:	Water, Strong acids, Carbon dioxide (CO ₂), Ammonium salts
Incompatible Conditions:	Air sensitive
Hazardous Decomposition Products:	Metal oxides

11. Toxicological Information

Potential Health Effects:	
Eyes:	Causes serious eye irritation
Skin:	Causes skin irritation
Ingestion:	May cause irritation
Inhalation:	May cause irritation
Chronic:	N/A
Signs & Symptoms:	N/A
Aggravated Medical Conditions:	N/A
Median Lethal Dose:	LD50 Oral- > 5000 mg/kg for rat by mouth
Carcinogen:	N/A

12. Ecological Information

Aquatic Toxicity:	N/A
Persistent Bioaccumulation Toxicity:	N/A
Very Persistent, Very Bioaccumulative:	N/A
Notes:	N/A

13. Disposal Considerations

Dispose of in accordance with local, state, national, and international regulations.

14. Transportation Data

Hazardous:	Not hazardous for transportation
Hazard Class:	N/A
Packing Group:	N/A
UN Number:	N/A
Proper Shipping Name:	N/A

15. Regulatory Information

Sec 302 Extremely Hazardous:	No
Sec 304 Reportable Quantities:	N/A
Sec 313 Toxic Chemicals:	No

16. Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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