

1. PRODUCT AND COMPANY IDENTIFICATION

Trade Name: Cerium Doped Yttrium Aluminum Garnet

Chemical Formula: $\text{Y}_3\text{Al}_5\text{O}_{12}:\text{Ce}$

Manufacturer Item Number: YT-5720

Manufacturer: Lorad Chemical Corporation
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2. HAZARD IDENTIFICATION

Signal Word: Warning

Pictograms:



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

Precautionary Statements: P261 Avoid breathing dust / fumes / gas / vapors / spray.
P271 Use only outdoors or in a well-ventilated area.
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
P312 Call a POISON CENTER or doctor if you feel unwell.
P304+340 IF INHALED: Remove a person to fresh air and keep comfortable for breathing.
P302+332+313 IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: get medical advice/attention.
P362+364 Take off contaminated clothing and wash it before reuse.
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do—continue rinsing.
P337+313 If eye irritation persists get medical advice / attention.

HMIS Health Ratings (0-4)

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

3. COMPOSITION

Additional Names: Yttrium Aluminum Oxide doped with Cerium; YAG:Ce

Percentage: 100 wt%

CAS #: 163584-80-3

EC #: No Data Available.

4. FIRST AID PROCEDURES

General Treatment	Consult a physician. Show this SDS to the doctor in attendance. Move out of dangerous area.
Special Treatment:	No Data Available.
Important Symptoms:	May cause temporary irritation on skin or eye contact. Symptoms may be delayed.
Inhalation:	If breathing, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Ingestion:	Never give anything by mouth to an unconscious person. Immediately contact a poison control center.
Skin:	For skin contact, flush with large amounts of water while removing contaminated clothing. Consult a physician if irritation develops and persists.
Eyes:	Immediately flush eyes with fresh water for at least 15 minutes while holding the eyelids open. Remove contact lenses if worn. Consult a physician if irritation persists.

5. FIREFIGHTING MEASURES

Flammability:	No Data Available.
Special Hazards from Substance:	Material may form irritating and toxic gaseous oxides at high temperatures.
Extinguishing Media:	Extinguish with water spray, carbon dioxide, dry chemical or material appropriate for surrounding fire.
Special Fire Fighting Procedures:	Wear self-contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

If Material is Released / Spilled:	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.
Environmental Precautions:	Prevent further leakage or spills if safe to do so. Do not allow to enter drains, sewers, or watercourses.

7. HANDLING AND STORAGE

Handling Conditions:	Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see Section 2.
Storage Conditions:	Keep container tightly closed in a dry and well-ventilated place.
Work / Hygienic Maintenance:	Keep formation of airborne dusts to a minimum. Guard against dust accumulation. In case of insufficient ventilation, wear suitable respiratory equipment.
Ventilation:	Provide appropriate exhaust ventilation at places where dust is formed. In case of insufficient ventilation wear suitable respiratory equipment.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible Exposure Limits:	No Data Available.
Threshold Limit Value:	Aluminum Cerium Yttrium Oxide (TWA 1 mg/m ³)
Special Equipment:	Use local exhaust ventilation. Facilities storing or using this material should be equipped with an eyewash facility and a safety shower.
Respiratory Protection:	Wear respirator if there is dust formation. In case of inadequate ventilation or risk of inhalation of dust, use suitable respiratory equipment.
Protective Gloves:	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.
Eye Protection:	Safety glasses. Use equipment for eye protection tested and approved under government standards such as NIOSH (US) or EN 166(EU).
Body Protection:	Wear appropriate protective clothing.

9. PHYSICAL AND CHEMICAL CHARACTERISTICS

Color:	yellow
Forms:	powder
Odor:	No Data Available.
Water Solubility:	No Data Available.
Boiling Point:	No Data Available.
Melting Point:	No Data Available.
Flash Point:	No Data Available.
Autoignition Temperature:	No Data Available.
Density:	4.55 g/cm ³
Molecular Weight:	733.73 g/mol

10. REACTIVITY

Stability:	Stable under recommended storage conditions.
Reacts with:	Avoid strong oxidizers, strong acids, and strong bases.
Incompatible Conditions:	Dust generation, heat, flames, and sparks.
Hazardous Decomposition Products:	Thermal decomposition can lead to release of irritating gases and vapors. Metal oxides.

11. TOXICOLOGICAL INFORMATION

Potential Health Effects:

- **Eyes** May cause eye irritation.
- **Skin** May cause skin irritation.
- **Ingestion** May cause discomfort if swallowed. Ingestion may cause irritation and malaise.
- **Inhalation** No data Available.
- **Chronic** Repeated inhalation may result in respiratory sensitization.

Signs and Symptoms: No Data Available.

Aggravate Medical Conditions: No Data Available.

Median Lethal Dose: No Data Available.

Carcinogen: No Data Available.

12. ECOLOGICAL INFORMATION

Aquatic Toxicity: This product is soluble in water.

Persistence and degradability: No Data Available.

Bioaccumulative potential: No Data Available.

Notes: This product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

13. DISPOSAL CONSIDERATIONS

Disposal: 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 appropriated waste handling site for recycling or disposal.

14. TRANSPORTATION DATA

Hazardous: DoT: Not Dangerous Goods
IMDG: Not Dangerous Goods
IATA: Not Dangerous Goods

Pictogram: N/A

Hazard Class: N/A

Packing Group: N/A

UN Number: N/A

Proper Shipping Name: N/A

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 minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards	Acute Health Hazard
Massachusetts Right to Know Components	No components are subject to Ma. Right to Know Act.
Pennsylvania Right to Know Components	Yttrium Aluminum Garnet, Cerium doped (CAS No. 163584-80-3)
New Jersey Right to Know Components	Yttrium Aluminum Garnet, Cerium doped (CAS No. 163584-80-3)
California Prop. 65 Components	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

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