

Material Safety Data Sheet

Identity: Erbium Oxide (Erbia)

Formula: Er₂O₃

Chemical Family: Rare Earth Oxide

Section I - General Information

Manufacturer: [Stanford Advanced Materials](#) (SAM)

The information below is believed to be accurate and represents the best information available to SAM. However, SAM makes no warranty, expressed or implied with respect to such information and we assume no liability resulting from its use.

Section II - Hazardous Ingredients/Identity Information

CAS #	%	OSHA/PEL	TLV
12061-16-4	100	N/E	N/E

Section III - Physical/Chemical Characteristics

Boiling Point: No data

Specific Gravity (water=1): 8.64

Melting Point: 2355°C

Vapor Pressure: Essentially 0

Physical States: Solid

Vapor Density: No data

Evaporation Rate: Essentially 0

Solubility in water: Insoluble

Readily absorbs CO₂ and H₂O from the atmosphere.

Percent Volatile: 0

Appearance and Odor: Pink powder, odorless

Section IV - Fire and Explosion Hazard Data:

Flammability: N/A Flash point: N/D

Extinguishing Media: Oxide does not burn. Use water, carbon dioxide, dry chemical extinguishing agents, dry sand, or dry ground dolomite.

Special Fire Fighting Procedures: No special firefighting procedures needed. Use normal procedures which include wearing NIOSH/MSHA approved self-contained breathing apparatus, flame and chemical resistant clothing, hats, boots, and gloves. If without risk, remove material from fire area. Cool container with water from maximum distance.

Section V - Reactivity Data

Stability: Stable

Conditions to Avoid: Thermal decomposition

Incompatibility - Materials to Avoid: Strong acids

Hazardous Polymerization: Will not occur

Section VI - Health Hazard Data

OSHA (PEL): Not established

ACGIH (TLV): Not established

Animal Toxicity

LD50: No data

LC50: No data

Effects of Overexposure

Acute Effects

Ingestion: May be harmful, effects unknown.

Skin Contact: May cause irritation. Eye

Contact: May cause eye irritation.

Inhalation: May cause lung irritation.

Medical conditions aggravated by the chemical: None known.

Other health hazards: Rare earth compounds may cause delayed blood clotting leading to hemorrhages.

Most likely route of entry: Ingestion

Chronic Effects: Ingestion: None

known. Skin/Eye Contact: None

known.

Inhalation: Chronic exposure to high concentrations may cause damage to mucous membranes and respiratory tract.

Other: None known.

Emergency and First Aid Procedures:

Ingestion: No data available, but one should obtain medical attention.

Skin: Remove contaminated clothing, flood skin with large amounts of water. If irritation persists seek medical attention.

Eye: Immediately flush eyes with large amounts of water for at least 15 minutes, including under eyelids. Call a physician.

Inhalation: No specific information available, one should obtain medical attention.

Section VII - Precautions for Safe Handling and Use

Steps to be taken in case material is released or spilled:

Wear appropriate respiratory and protective equipment specified in section VIII - control measures. Isolate spill area, provide ventilation and extinguish sources of ignition. Vacuum up

spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust. Use non-sparking tools.

Waste disposal method:

Dispose of in accordance with state, local, and federal regulations.

Hazard Label Information:

Store in cool, dry area. Store in tightly sealed container. Wash thoroughly after handling.

Section VIII - Control Measures

Protective Equipment Summary - Hazard Label Information:

NIOSH/MSHA approved respirator, Impervious gloves, Safety glasses, clothes to prevent skin contact.

Respiratory Protection (Specify Type) - NIOSH - approved dust respirator.

Ventilation:

Local Exhaust: To maintain concentration at low exposure levels.

Mechanical (General): Recommended.

Protective Gloves: Rubber gloves. *Eye Protection:* Safety glasses.

Other Protective Clothing or Equipment: Protective gear suitable to prevent contamination.

Work/Hygienic/Maintenance Practices: Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. 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.