Materials Safety Data Sheet

Erbium Metal (Granules, Target, Foil, Rod)

1. Product and Company Identification

Product Name: Erbium Metal
Formula: Er
CAS: 7440-52-0
EC No.: 231-160-1
Synonyms: None

Recommended Use: Laboratory chemicals, Scientific research
Uses advised against: No specific uses advised against have been identified.

Supplier: UltraPurMat Group Co., Ltd
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Tel: +86-29-88993870
Email: sales@ulpmat.com
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2. Hazards Identification

Classification of the substance or mixture
The substance is not classified as hazardous.

GHS Label elements, including precautionary statements
Pictogram: None
Signal Word: None
Hazard statement(s):None
Precautionary Statement(s): None

Other hazards: The product, in its supplied solid forms, is not classified as hazardous under the applicable CLP criteria. However, fine metal dust generated during processing may present a fire hazard if exposed to heat, sparks or flames. Avoid the formation and accumulation of dust.

3. Composition

Components	CAS	Classification (H)	Concentration
Erbium (Er)	7440-52-0	Not classified	⩽100%

4. First Aid Procedures

Description of first aid measures

General Treatment: If symptoms persist, call a physician.

Inhalation: Remove victim to fresh air. If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water. Seek medical attention if you feel unwell.

Skin: Take off immediately all contaminated clothing. Rinse skin with water/shower. Seek medical attention.

Eyes: Rinse with pure water for at least 15 minutes. Remove contact lenses, if present and easy to do. Seek medical attention.

Most important symptoms and effects, both acute and delayed

Most important symptoms and effects, both acute and delayed, are included on labelling (Section 2) and in Section 11.

Indication of any immediate medical attention and special treatment needed

Based on the symptoms that appear, provide targeted treatment. Be aware that symptoms may be delayed.

5. Firefighting Measures

Extinguishing Media: Use Class D dry powder extinguishing agent.

Unsuitable extinguishing media: Water

Special hazards arising from the substance or mixture

Erbium oxides and other irritating fumes may be released in a fire. Fine metal dust and thin foil may ignite when exposed to heat, sparks or flames. Contact with water may release flammable hydrogen gas.

Advice for firefighters

As in any fire, wear self-contained breathing apparatus (pressure-demand, MSHA/NIOSH approved or equivalent) and full protective gear. Fight fire from a safe distance and with adequate protection. Do not allow firefighting water to enter drains or watercourses. Collect contaminated firefighting water separately.

Further information

No data available.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Remove persons to safety. Use personal protective equipment as required. Avoid dust formation. Ensure adequate ventilation. For emergency responders: Wear breathing apparatus if exposed to vapours/dust/spray/gases.

Environmental precautions

Keep away from drains, surface and groundwater. Retain contaminated washing water and dispose of it.

Methods and materials for containment and cleaning up

Prevent material from entering drains and waterways. Avoid generating dust or fine particles. Collect the material mechanically using a suitable dry method and place it in a compatible container for recovery or disposal. Avoid contact with water or moisture if the material's reactivity requires this precaution. Ventilate the affected area and refer to Section 8 for personal protective equipment.

Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

7. Handling and Storage

Precautions for safe handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid ingestion and inhalation. Avoid formation of dust. Do not get in eyes, on skin, or on clothing. Use non-sparking tools. Protect from sources of ignition. Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place.
Storage class: 13. Incompatible materials: Strong acids, Strong oxidizing agents, Halogens, Water/moisture.

Specific end use(s)

Apart from the uses mentioned in section 1 no other specific uses are stipulated.

8. Exposure Controls/Personal Protection

Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles) (European standard - EN 166) and face protection.

Skin protection

Wear protective gloves selected according to the material's hazards and the anticipated conditions of use. Gloves must comply with Regulation (EU) 2016/425 and the applicable

requirements of EN ISO 374, where relevant. Wear appropriate protective clothing to prevent skin exposure. Wash hands thoroughly after handling.

Body Protection

Wear appropriate protective clothing to prevent skin exposure.

Respiratory protection

No protective equipment is needed under normal use conditions. Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. Recommended filter type: Particulates filter. Small scale/Laboratory use: Maintain adequate ventilation.

Control of environmental exposure

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and groundwater.

9. Physical and Chemical Characteristics

Information on basic physical and chemical properties

Appearance

Form: Solid (Granules, Target, Foil, Rod)

Colour: Silver gray metallic

Odor: Odorless

pH: No data available

Melting point/range: 1529 °C

Boiling point/range: 2868 °C

Flash point: No data available

Evaporation rate: Not applicable - Solid

Flammability (solid, gas): No data available

Upper/lower flammability or explosive limits: No data available

Vapor pressure: No data available

Relative density: 9.062 g/cm³

Water solubility: Insoluble

Partition coefficient: No data available

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity: No data available

Other information

Molecular formula: Er

Molecular weight: 167.3 g/mol

10. Stability and reactivity

Reactivity

Contact with water or acids may release flammable hydrogen gas, depending on the material's physical form and exposure conditions.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Flammable in the form of dust when exposed to heat, spark or flame. May react with water under fire conditions liberating flammable hydrogen gas. Contact with acids may evolve hydrogen gas.

Conditions to avoid

Avoid creating or accumulating fines or dusts, especially near possible ignition sources such as sparks or flame.

Incompatible materials

Strong acids, Strong oxidizing agents, Halogens, Water/moisture.

Hazardous decomposition products

Erbium oxide, erbium hydroxides, hydrogen. In the event of fire: see section 5.

11. Toxicological Information

Information on toxicological effects

Acute toxicity

No data available.

Skin corrosion/irritation

No data available.

Serious eye damage/eye irritation

No data available.

Respiratory or skin sensitisation

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

No data available. 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.

Reproductive toxicity

No data available.

Specific target organ toxicity -single exposure

No data available.

Specific target organ toxicity -repeated exposure

No data available.

Aspiration hazard

Not applicable. Solid.

Additional Information

This product does not contain any known or suspected endocrine disruptors.

12. Ecological Information

Toxicity

No data available.

Persistence and degradability

No data available.

Bioaccumulative potential

No data available.

Mobility in soil

No data available.

Results of PBT and vPvB assessment

In accordance with Annex XIII of the REACH Regulation, inorganic substances do not require assessment.

Other adverse effects

13. Disposal Considerations

Waste treatment methods

Dispose of the material through an authorized waste management facility in accordance with applicable local, regional, national and international regulations. Where feasible, consider recovery or recycling by a facility equipped to handle the material. The appropriate treatment method must be determined based on the waste classification, physical form and reactivity. Do not incinerate unless specifically authorized and conducted under appropriate controlled conditions.

14. Transportation Information

ADR

Not classified as hazardous for transport.

IMDG

Not classified as hazardous for transport.

IATA

Not classified as hazardous for transport.

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Regulation (EC) 1907/2006, REACH, Annex XIV list of substances subject to authorisation: Not applicable

Regulation (EC) 1907/2006, REACH, Annex XVII restrictions on the manufacture, placing on the market and use of certain dangerous substances: Not applicable

Regulation (EC) 1005/2009 on substances that deplete the ozone layer: Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants: Not applicable

Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

16. Other information

Revision Date:
2026-09-22
Version:
1.0

Disclaimer
The information of this safety data sheet 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.
This Safety Data Sheet is prepared in accordance with Regulation (EC) No 1907/2006 (REACH), Annex II.