

# SAFETY DATA SHEET

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## SECTION 1. IDENTIFICATION

**Product Identifier:** (5N) 99.999% Tris(methylcyclopentadienyl)erbium(III)

**Product Code:** ER-TMC5DE-05-P

**CAS Number:** 39470-10-5

**Relevant identified uses of the substance:** Scientific research and development

Supplier details:

American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351  
Emergency telephone number:  
+1 800-424-9300

## SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

Label elements

GHS label elements

The substance is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms



GHS07

· Signal word Warning

· Hazard-determining components of labeling:

Tris(methylcyclopentadienyl)erbium (99.9%-Er) (REO)

· Hazard statements

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

- Precautionary statements  
P231 Handle under inert gas.  
P222 Do not allow contact with air.  
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P422 Store contents under inert gas.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
  - Classification system:  
· NFPA ratings (scale 0 - 4)  
1 0 0  
Health = 1  
Fire = 0  
Reactivity = 0
  - HMIS-ratings (scale 0 - 4)  
Health = 1  
Fire = 0  
Reactivity = 0
  - Other hazards
  - Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
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## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization: Substances

- CAS No. Description  
39470-10-5 Tris(methylcyclopentadienyl)erbium (99.9%-Er) (REO)
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## SECTION 4. FIRST AID MEASURES

- Description of first aid measures
  - After inhalation: In case of unconsciousness place patient stably in side position for transportation.
  - After skin contact: Immediately wash with water and soap and rinse thoroughly.
  - After eye contact:  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
  - After swallowing: If symptoms persist consult doctor.
  - Information for doctor:  
· Most important symptoms and effects, both acute and delayed No further relevant information available.
  - Indication of any immediate medical attention and special treatment needed  
No further relevant information available.
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## SECTION 5. FIREFIGHTING MEASURES

- Extinguishing media
- Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- Special hazards arising from the substance or mixture No further relevant information available.

- Advice for firefighters
  - Protective equipment: No special measures required.
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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures Not required.
  - Environmental precautions: No special measures required.
  - Methods and material for containment and cleaning up:  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
  - Reference to other sections  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
  - Protective Action Criteria for Chemicals
  - PAC-1:  
Substance is not listed.
  - PAC-2:  
Substance is not listed.
  - PAC-3:  
Substance is not listed.
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## **SECTION 7. HANDLING AND STORAGE**

- Handling: Handle under inert gas.
  - Precautions for safe handling Open and handle receptacle with care.
  - Information about protection against explosions and fires: No special measures required.
  - Conditions for safe storage, including any incompatibilities
  - Storage: Store contents under inert gas.
  - Requirements to be met by storerooms and receptacles: No special requirements.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions: Keep receptacle tightly sealed.
  - Specific end use(s) No further relevant information available.
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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

- Additional information about design of technical systems: No further data; see item 7.
- Control parameters
- Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- Exposure controls
- Personal protective equipment:
  - General protective and hygienic measures:  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.
  - Breathing equipment: A NIOSH approved respirator in accordance with 29 CFR 1910.134.
  - Protection of hands:  
Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and

varies from manufacturer to manufacturer.

- Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- Eye protection:

Tightly sealed goggles

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Information on basic physical and chemical properties

- General Information

- Appearance:

Form: Powder

Color: Yellow

- Odor: Odorless

- Odor threshold: Not determined.

- pH-value: Not applicable.

- Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

- Flash point: Not applicable.

- Flammability (solid, gaseous): Not determined.

- Ignition temperature:

Decomposition temperature: Not determined.

- Auto igniting: Not determined.

- Danger of explosion: Product does not present an explosion hazard.

- Explosion limits:

Lower: Not determined.

Upper: Not determined.

- Vapor pressure: Not applicable.

- Density: Not determined.

- Relative density Not determined.

- Vapor density Not applicable.

- Evaporation rate Not applicable.

- Solubility in / Miscibility with

Water: Insoluble.

- Partition coefficient (n-octanol/water): Not determined.

- Viscosity:

Dynamic: Not applicable.

Kinematic: Not applicable.

- Solvent content:

Organic solvents: 0.0 %

VOC content: 0.0 g/l / 0.00 lb/gl

Solids content: 100.0 %

· Other information No further relevant information available.

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## **SECTION 10. STABILITY AND REACTIVITY**

- Reactivity No further relevant information available.
  - Chemical stability
  - Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
  - Possibility of hazardous reactions No dangerous reactions known.
  - Conditions to avoid No further relevant information available.
  - Incompatible materials: No further relevant information available.
  - Hazardous decomposition products: No dangerous decomposition products known.
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## **SECTION 11. TOXICOLOGICAL INFORMATION**

- Information on toxicological effects
  - Acute toxicity:
  - Primary irritant effect:
  - on the skin: Irritant to skin and mucous membranes.
  - on the eye: Irritating effect.
  - Sensitization: No sensitizing effects known.
  - Additional toxicological information:
  - Carcinogenic categories
  - IARC (International Agency for Research on Cancer)  
Substance is not listed.
  - NTP (National Toxicology Program)  
Substance is not listed.
  - OSHA-Ca (Occupational Safety & Health Administration)  
Substance is not listed.
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## **SECTION 12. ECOLOGICAL INFORMATION**

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability No further relevant information available.
  - Behavior in environmental systems:
  - Bioaccumulative potential No further relevant information available.
  - Mobility in soil No further relevant information available.
  - Additional ecological information:
  - General notes: Not known to be hazardous to water.
  - Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
  - Other adverse effects No further relevant information available.
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## SECTION 13. DISPOSAL CONSIDERATIONS

- Waste treatment methods
- Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.
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## SECTION 14. TRANSPORT INFORMATION

- UN-Number
  - DOT, ADN, IMDG, IATA not regulated
  - UN proper shipping name
  - DOT, ADN, IMDG, IATA not regulated
  - Transport hazard class(es)
  - DOT, ADN, IMDG, IATA
  - Class not regulated
  - Packing group
  - DOT, IMDG, IATA not regulated
  - Environmental hazards:
  - Marine pollutant: No
  - Special precautions for user Not applicable.
  - Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.
  - UN "Model Regulation": not regulated
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## SECTION 15. REGULATORY INFORMATION

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara
- Section 355 (extremely hazardous substances):  
Substance is not listed.
- Section 313 (Specific toxic chemical listings):  
Substance is not listed.
- TSCA (Toxic Substances Control Act):  
Substance is not listed.
- Proposition 65
- Chemicals known to cause cancer:  
Substance is not listed.
- Chemicals known to cause reproductive toxicity for females:  
Substance is not listed.
- Chemicals known to cause reproductive toxicity for males:  
Substance is not listed.
- Chemicals known to cause developmental toxicity:  
Substance is not listed.
- Carcinogenic categories
- EPA (Environmental Protection Agency)  
Substance is not listed.
- TLV (Threshold Limit Value established by ACGIH)  
Substance is not listed.
- NIOSH-Ca (National Institute for Occupational Safety and Health)

Substance is not listed.

- GHS label elements

The substance is classified and labeled according to the Globally Harmonized System (GHS).

- Hazard pictograms

GHS07

- Signal word Warning

- Hazard-determining components of labeling:

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and easy to do. Continue rinsing.

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P422 Store contents under inert gas.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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## 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). 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 is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.