

Europium Balls	Pricing >
Europium Band	Pricing >
Europium Bars	Pricing >
Europium Block	Pricing >
Europium Chips	Pricing >
Europium Chunk	Pricing >
Europium Coil	Pricing >
Europium Concentrate	Pricing >
Europium Cubes	Pricing >
Europium Cylinder	Pricing >
Europium Dendritic Pieces	Pricing >
Europium Disc	Pricing >
Europium Flake	Pricing >
Europium Flange	Pricing >
Europium Foil	Pricing >
Europium Granules	Pricing >
Europium Ingot	Pricing >
Europium Lump	Pricing >
Europium Mesh	Pricing >
Europium Metal	Pricing >
Europium Microfoil	Pricing >
Europium Microleaf	Pricing >
Europium Nanoparticle Dispersion	Pricing >
Europium Nanoparticles	Pricing >
Europium Nanorods	Pricing >
Europium Particles	Pricing >
Europium Parts	Pricing >
Europium Pellets	Pricing >
Europium Pieces	Pricing >
Europium Plate	Pricing >

Europium Powder	Pricing >
Europium Puck	Pricing >
Europium Ribbon	Pricing >
Europium Ring	Pricing >
Europium Rod	Pricing >
Europium Rotatable Sputtering Target	Pricing >
Europium Samples	Pricing >
Europium Shavings	Pricing >
Europium Sheet	Pricing >
Europium Shot	Pricing >
Europium Single Crystal	Pricing >
Europium Sleeve	Pricing >
Europium Slugs	Pricing >
Europium Specimen	Pricing >
Europium Spheres	Pricing >
Europium Spring	Pricing >
Europium Sputtering Target	Pricing >
Europium Strip	Pricing >
Europium Tape	Pricing >
Europium Tube	Pricing >
Europium Wafer	Pricing >
Europium Wire	Pricing >
Ultra Thin Europium Nanoscale Foil	Pricing >

Linear Formula	Eu
Pubchem CID	23981
MDL Number	MFCD00010992
EC No.	231-161-7
Beilstein/Reaxys No.	N/A
SMILES	UN 2813 4.3/PG 1
Inchl Identifier	InChI=1S/Eu
Inchl Key	OGPBJKLSAFTDLK-UHFFFAOYSA-N
Signal Word	Danger
Hazard Statements	H250
Hazard Codes	F

Risk Codes	14/15-17
Safety Statements	43-7/8
RTECS Number	N/A
Transport Information	UN 2813 4.3/PG 1
WGK Germany	3

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SAFETY DATA SHEET

Date Accessed: 04/19/2024

Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifiers: All applicable American Elements product codes for CAS #7440-53-1

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:
Domestic, North America +1 800-424-9300
International +1 703-527-3887

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)
GHS02 Flame
Pyr. Sol. 1 H250 Catches fire spontaneously if exposed to air.
Water-react. 2 H261 In contact with water releases flammable gas.
Hazards not otherwise classified
No data available
GHS label elements
GHS label elements, including precautionary statements
Hazard pictograms



GHS02

Signal word

Danger

Hazard statements

H250 Catches fire spontaneously if exposed to air.

H261 In contact with water releases flammable gas.

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P222 Do not allow contact with air.

P231+P232 Handle under inert gas. Protect from moisture.

P370+P378 In case of fire: Use for extinction: Special powder for metal fires.

P422 Store contents under inert gas.

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

WHMIS classification

B6 - Reactive flammable material

Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH

FIRE

REACTIVITY

1

3

2

Health (acute effects) = 1

Flammability = 3

Physical Hazard = 2

Other hazards

Results of PBT and vPvB assessment

PBT:

N/A

vPvB:

N/A

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

CAS No. / Substance Name:

7440-53-1 Europium

Identification number(s):

EC number:

231-161-7

SECTION 4. FIRST AID MEASURES

Description of first aid measures

If inhaled:

Supply patient with fresh air. If not breathing, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

In case of skin contact:

Immediately wash with soap and water; rinse thoroughly.

Seek immediate medical advice.

In case of eye contact:

Rinse opened eye for several minutes under running water. Consult a physician.

If swallowed:

Seek medical treatment.

Information for doctor

Most important symptoms and effects, both acute and delayed

No data available

Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing agents

In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.

Special powder for metal fires. Do not use water.

For safety reasons unsuitable extinguishing agents

Water

Special hazards arising from the substance or mixture

Reacts violently with water

Spontaneously flammable in air.

If this product is involved in a fire, the following can be released:

Europium oxide

Advice for firefighters

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources

Environmental precautions:

Do not allow product to enter drains, sewage systems, or other water courses.

Methods and materials for containment and cleanup:

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

Prevention of secondary hazards:

Keep away from ignition sources.

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.

SECTION 7. HANDLING AND STORAGE

Handling

Precautions for safe handling

Handle under dry protective gas.

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Information about protection against explosions and fires:

Protect against electrostatic charges.

Substance/product is self ignitable.

Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles:

No special requirements.

Information about storage in one common storage facility:

Store away from air.

Store away from water/moisture.

Do not store together with acids.

Store away from oxidizing agents.

Store away from halogens.

Store away from acid chlorides.

Further information about storage conditions:

Store under dry inert gas.

This product is moisture sensitive.

This product is air sensitive.

Protect from humidity and water.

Keep container tightly sealed.

Store in cool, dry conditions in well-sealed containers.

Specific end use(s)

No data available

SECTION 8. EXPOSURE

CONTROLS/PERSONAL PROTECTION

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:

None.

Additional information:

No data

Exposure controls

Personal protective equipment

Follow typical protective and hygienic practices for handling chemicals.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Maintain an ergonomically appropriate working environment.

Breathing equipment:

Use suitable respirator when high concentrations are present.

Recommended filter device for short term use:

Use a respirator with type P100 (USA) or P3 (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.

Protection of hands:

Impervious gloves

Inspect gloves prior to use.

Suitability of gloves should be determined both by material and quality, the latter of which may vary by manufacturer.

Eye protection:

Safety glasses

Full face protection

Body protection:

Protective work clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance:

Form: Solid

Color: Grey

Odor: Odorless

Odor threshold: No data available.
pH: N/A
Melting point/Melting range: 822 °C (1512 °F)
Boiling point/Boiling range: 1596 °C (2905 °F)
Sublimation temperature / start: No data available
Flammability (solid, gas)
Contact with water liberates extremely flammable gases.
Ignition temperature: No data available
Decomposition temperature: No data available
Autoignition: Spontaneously flammable in air.
Danger of explosion: No data available.
Explosion limits:
Lower: No data available
Upper: No data available
Vapor pressure: N/A

Density at 20 °C (68 °F): 5.244 g/cm³ (43.761 lbs/gal)
Relative density
No data available.
Vapor density
N/A
Evaporation rate
N/A
Solubility in Water (H₂O): Reacts violently
Contact with water releases flammable gases
Partition coefficient (n-octanol/water): No data available.
Viscosity:
Dynamic: N/A
Kinematic: N/A
Other information
No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity
Reacts violently with water.
In contact with water releases flammable gases which may ignite spontaneously.
Catches fire spontaneously if exposed to air.
Chemical stability
Stable under recommended storage conditions.
Thermal decomposition / conditions to be avoided:
Decomposition will not occur if used and stored according to specifications.
Possibility of hazardous reactions
Reacts with strong oxidizing agents
Spontaneously flammable in air.
Contact with water releases flammable gases
Reacts violently with water
Conditions to avoid
No data available
Incompatible materials:

Acids
Air
Oxidizing agents
Halogens
Acid chlorides
Water/moisture
Hazardous decomposition products:
Europium oxide

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity:

No effects known.

LD/LC50 values that are relevant for classification:

No data

Skin irritation or corrosion:

May cause irritation

Eye irritation or corrosion:

May cause irritation

Sensitization:

No sensitizing effects known.

Germ cell mutagenicity:

No effects known.

Carcinogenicity:

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

Reproductive toxicity:

No effects known.

Specific target organ system toxicity - repeated exposure:

No effects known.

Specific target organ system toxicity - single exposure:

No effects known.

Aspiration hazard:

No effects known.

Subacute to chronic toxicity:

No effects known.

Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity

Aquatic toxicity:

No data available

Persistence and degradability

No data available
Bioaccumulative potential
No data available
Mobility in soil
No data available
Additional ecological information:
Do not allow undiluted product or large quantities to reach groundwater, water courses, or sewage systems.
Avoid transfer into the environment.
Results of PBT and vPvB assessment
PBT:
N/A
vPvB:
N/A
Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Recommendation
Consult official regulations to ensure proper disposal.
Uncleaned packagings:
Recommendation:
Disposal must be made according to official regulations.

SECTION 14. TRANSPORT INFORMATION

UN-Number
DOT, IMDG, IATA
UN3208
UN proper shipping name
DOT
Metallic substance, water-reactive, n.o.s. (Europium)
IMDG, IATA
METALLIC SUBSTANCE, WATER-REACTIVE,
N.O.S. (Europium)
Transport hazard class(es)
DOT
Class
4.3 Substances which, in contact with water, emit flammable gases.
Label
4.3
Class
4.3 (W2) Substances which, in contact with water, emit flammable gases
Label

4.3
IMDG, IATA
Class
4.3 Substances which, in contact with water, emit flammable gases.
Label
4.3
Packing group
DOT, IMDG, IATA
II
Environmental hazards:
N/A
Special precautions for user
Warning: Substances which, in contact with water, emit flammable gases
EMS Number: F-G,S-N
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
N/A
Transport/Additional information:
DOT
Marine Pollutant (DOT):
No
UN "Model Regulation":
UN3208, Metallic substance, water-reactive, n.o.s. (Europium), 4.3, II

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture
GHS GHS label elements, including precautionary statements
Hazard pictograms
GHS02
Signal word
Danger
Hazard statements
H250 Catches fire spontaneously if exposed to air.
H261 In contact with water releases flammable gas.
Precautionary statements
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P222 Do not allow contact with air.
P231+P232 Handle under inert gas. Protect from moisture.
P370+P378 In case of fire: Use for extinction: Special powder for metal fires.
P422 Store contents under inert gas.
P501 Dispose of contents/container in accordance with local/regional/

national/international regulations.

National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

All components of this product are listed on the Canadian Non-Domestic Substances List (NDSL).

SARA Section 313 (specific toxic chemical listings)

Substance is not listed.

California Proposition 65

Prop 65 - Chemicals known to cause cancer

Substance is not listed.

Prop 65 - Developmental toxicity

Substance is not listed.

Prop 65 - Developmental toxicity, female

Substance is not listed.

Prop 65 - Developmental toxicity, male

Substance is not listed.

Information about limitation of use:

For use only by technically qualified individuals.

Other regulations, limitations and prohibitive regulations

Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006.

Substance is not listed.

The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.

Substance is not listed.

Annex XIV of the REACH Regulations (requiring Authorisation for use)

Substance is not listed.

Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

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

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