SAFETY DATA SHEET

Date Printed: 03/28/2024
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SECTION 1. IDENTIFICATION

Product Identifier: (5N) 99.999% Thorium Chloride

Product Code: TH-M-03-CL

CAS Number: 10026-08-1

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:
+1 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

Hazard description:
Xn Harmful
Information pertaining to particular dangers for man and environment
R 20/22 Harmful by inhalation and if swallowed.
R 33 Danger of cumulative effects.
Classification system
HMIS ratings (scale 0-4)
(Hazardous Materials Identification System)
HEALTH
FIRE
REACTIVITY
2
0
2
Health (acute effects) = 2
Flammability = 0
Reactivity = 2

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization:
Description: (CAS#)
Thorium chloride (CAS# 10026-08-1), 100%
Identification number(s):
EINECS Number: 2338450

SECTION 4. FIRST AID MEASURES

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. Then consult a doctor.
If swallowed:
Seek immediate medical advice.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing agents
CO_2, extinguishing powder or water spray. Fight larger fires with water spray.
Special hazards caused by the material, its products of combustion or resulting gases:
In case of fire, the following can be released:
Hydrogen chloride (HCl)
Toxic metal oxide fume
Protective equipment:
Wear self-contained respirator.
Wear fully protective impervious suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Person-related safety precautions:
Use personal protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Measures for environmental protection:
Do not allow material to be released to the environment without proper governmental permits.
Measures for cleaning/collecting:
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Additional information:
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
Information for safe handling:
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:
No special measures required.
Storage
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 container tightly sealed.
Store in cool, dry conditions in well-sealed containers.

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.
Components with limit values that require monitoring at the workplace:
Not required.
Additional information: No data
Personal protective equipment
General protective and hygienic measures
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Remove all soiled and contaminated clothing immediately.
Wash hands before breaks and at the end of work.
Breathing equipment:
Use suitable respirator when high concentrations are present.
Protection of hands: Impervious gloves
Eye protection: Safety glasses
Body protection: Protective work clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

General Information
Form: Crystalline
Color: White
Odor: Odorless
Melting point/Melting range: 768-772°C (1414-1422°F)
Boiling point/Boiling range: 928°C (1702°F) ((dec))
Sublimation temperature / start: No data available
Flash point: N/A

Ignition temperature: No data available
Decomposition temperature: No data available
Danger of explosion: Product does not present an explosion hazard.
Explosion limits:
Lower: No data available
Upper: No data available
Vapor pressure: No data available

Density at 20°C (68°F): 4.59 g/cm^3
Solubility in / Miscibility with
Water: Soluble

SECTION 10. STABILITY AND REACTIVITY

Thermal decomposition / conditions to be avoided:
Decomposition will not occur if used and stored according to specifications.
Materials to be avoided: None known.
Dangerous reactions No dangerous reactions known
Dangerous products of decomposition:
Hydrogen chloride (HCl)
Toxic metal oxide fume

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity:
Primary irritant effect:
on the skin: Irritant to skin and mucous membranes.
on the eye: Irritating effect.
Sensitization: No sensitizing effects known.
Subacute to chronic toxicity:
Exposure to thorium may cause gastrointestinal distress, skin, eye, or lung irritation. Radiation damage and cancers of bone, blood, liver or kidney may result.
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

General notes:
Do not allow material to be released to the environment without proper governmental permits.

SECTION 13. DISPOSAL CONSIDERATIONS

Product:

Recommendation
Consult official regulations to ensure proper disposal.
Not a solid waste by RCRA exclusion, see 40CFR261.4.(a).(4).
See 10CFR part 40 for disposal.
Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.
Recommended cleansing agent: Water, if necessary with cleansing agents.

SECTION 14. TRANSPORT INFORMATION

DOT regulations:
Hazard class: 7
Identification number: UN2910
Proper shipping name (technical name): RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - LIMITED QUANTITY OF MATERIAL
Land transport ADR/RID (cross-border)
ADR/RID class: 7 Radioactive material
UN-Number: 2910
Packaging group: -
Description of goods: 2910 RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - LIMITED QUANTITY OF MATERIAL
Maritime transport IMDG:
IMDG Class: 7
UN Number: 2910
Proper shipping name: RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - LIMITED QUANTITY OF MATERIAL
Air transport ICAO-TI and IATA-DGR:
ICAO/IATA Class: 7
UN/ID Number: 2910
Proper shipping name: RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - LIMITED QUANTITY OF MATERIAL

SECTION 15. REGULATORY INFORMATION

Product related hazard informations:
Hazard symbols:
Xn Harmful
Risk phrases:
20/22 Harmful by inhalation and if swallowed.
33 Danger of cumulative effects.
Safety phrases:
9 Keep container in a well-ventilated place.
36/37 Wear suitable protective clothing and gloves.
38 In case of insufficient ventilation, wear suitable respiratory equipment.
National regulations
All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.
This product contains a chemical known to the state of California to

cause cancer or reproductive toxicity.
Information about limitation of use:
For use only by technically qualified individuals.
The radioactive content of thorium and thorium containing materials is defined as it's specific activity. The specific activity of naturally occuring thorium is 0.00000022 curie/gram (8140 Bq/gram) of contained thorium.

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.