Cerium(III) Oxalate, Anhydrous	Pricing >

Linear Formula	$Ce_2(C_2O_4)_3$
Pubchem CID	165565
MDL Number	MFCD00013082
EC No.	205-362-5
IUPAC Name	cerium(3+); oxalate
Beilstein/Reaxys No.	N/A
SMILES	C(=O)(C(=O)[O-])[O-].C(=O)(C(=O)[O-])[O-].C(=O)(C(=O)[O-])[O-].[Ce+3].[Ce+3]
Inchl Identifier	InChI=1S/3C2H2O4.2Ce/c3*3-1(4)2(5)6;;/h3*(H,3,4)(H,5,6);;/q;;;2*+3/p-6
Inchl Key	ZMZNLKYXLARXFY-UHFFFAOYSA-H
Signal Word	Danger
Hazard Statements	H301-H311-H314-H319-H331-H335-H370
Hazard Codes	Xn, C, T
Precautionary Statements	P260-P264-P270-P271-P280-P301+P310-P302+P352-P304+P340-P305+P351+P338-P308+P313-P332+P313-P403+P233
Flash Point	188.8 °C
Risk Codes	R21/R22
Safety Statements	S24/S25
RTECS Number	N/A
Transport Information	UN3288 6.1/PG III
GHS Pictograms	GHS05 Corrosive  GHS06 Skull and Crossbones  GHS08 Health Hazard 

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SAFETY DATA SHEET

Date Accessed: 04/28/2024
Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifiers: All applicable American Elements product codes for CAS #139-42-4

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

Statement of Hazard: Corrosive, Irritant, Respiratory irritant, Toxic
Acute Health Hazard: Irritant to eyes, skin, mucous membranes and respiratory system.
May be toxic by ingestion, skin absorption and inhalation.
Chronic Health Hazard: Target organ effect
HMIS Rating:
H: 3
F: 0
P: 1
NFPA Rating:
H: 3
F: 0
P: 1
To the best of our knowledge, the toxicological properties of this chemical have not been thoroughly investigated. Use appropriate procedures and precautions to prevent or minimize exposure.
Pictogram:

Signal Word: Danger
Hazard Statement(s):
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H370 Causes damage to organs.
Precautionary Statement(s):
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink, or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302+P352 IF ON SKIN: wash with plenty of soap and water.
P304+P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with

water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P332+P313 IF SKIN irritation occurs: Get medical advice/attention.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name: Cerium oxalate
Synonyms: Synonum: Cerium(III) oxalate
CAS Number: 139-42-4
MDL Number: MFCD00013082
EINECS Number: 205-362-5
Beilstein Registry Number: Not Available
Molecular Formula: C6Ce2O12
Molecular Weight: 544.29
Content: As specified in product name.

SECTION 4. FIRST AID MEASURES

Eye Contact: Flush eyes with large amounts of water for fifteen minutes. Separate eyelids with fingers. If irritation persists, seek medical attention.
Skin Contact: Wash skin with soap and water. If irritation persists, seek medical attention.
Ingestion: Do not induce vomiting. Seek medical attention.
Inhalation: Move to a fresh air environment. Contact a physician if breathing becomes difficult.

SECTION 5. FIREFIGHTING MEASURES

Flash Point (ºC): 188.8
Explosion Limits: Not Available
Auto Ignition Temperature (ºC): Not Available
Extinguishing Media: Carbon dioxide, dry chemical powder, alcohol-resistant foam, or water spray
Protective Equipment: Wear self-contained respirator and fully protective impervious suit.
Specific Hazards: May emit hazardous fumes under fire conditions.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Protection: Wear a self-contained breathing apparatus, rubber boots and gloves, and disposable coveralls. Dispose of coveralls after use. Remove from ignition sources if safe to do so. Follow emergency response plan and contact proper authorities if needed. Keep unprotected persons away.
Environmental Protection: Keep spills out of sewers and bodies of water. Dike and contain the spill with inert material. Absorb on sand, vermiculite or diatomite. Transfer material to a container for disposal or recovery. Ventilate area and wash spill site after material pickup is complete.

SECTION 7. HANDLING AND STORAGE

Handling and Storage: Avoid breathing dust, vapor, mist or gas. Avoid contact with skin and eyes. Avoid prolonged or repeated exposure. Use only in a chemical fume hood. Open and handle container with care. Keep ignition sources away. Store in a tightly closed container in a dry, well-ventilated place.
Sensitivities: Not Available
Storage Temperature (ºC): 15 to 30

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Use product in a well ventilated area or under a fume hood. Use proper lab equipment while handling this product. Keep away from incompatible materials for possible risk of hazardous reaction.
Eye Protection: Wear appropriate protective eyeglass or chemical safety goggles. Make sure that there is an eyewash station in your vicinity.
Skin Protection: Wear impervious gloves and protective clothing.
Respiratory Protection: Use a NIOSH approved respirator when exposure limits are exceeded or if irritation or other symptoms are experienced.
Exposure Limits: Not Available

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White crystalline powder

Odor: Not Available
Odor Threshold: Not Available
Flash Point (ºC): 188.8
Auto Ignition Temperature (ºC): Not Available
UEL % by Volume: Not Available
LEL % by Volume: Not Available
Melting Point (ºC): Not Available
Boiling Point (ºC): 365.1
Evaporation Rate: Not Available
pH Value: Not Available
Density (g/cm^3): Not Available
Refractive Index (n^{20}D): Not Available
Viscosity: Not Available
Solubility in Water: Slightly soluble
Solubility in Other: Not Available
Vapor Pressure (mmHg): Not Available
Vapor Density (Air=1): Not Available

SECTION 10. STABILITY AND REACTIVITY

Stability: Stable under normal temperatures and pressures.
Incompatibility: Not Available
Reactivity: Product may react with incompatible materials to release other hazardous substances.
Conditions to Avoid: Heat, flame, sparks, other ignition sources.
Hazardous Decomposition Products: Carbon oxides, Cerium oxides

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SECTION 11. TOXICOLOGICAL INFORMATION

RTECS Reference: Not Available
Target Organs: Not Available
Toxicity Data: Not Available
Carcinogenicity:
National Toxicology Program (NTP) listed: Not Available
International Agency for Research on Cancer (IARC) listed: Not Available
Potential Symptoms: Not Available

SECTION 12. ECOLOGICAL INFORMATION

Toxicity: Not Available

SECTION 13. DISPOSAL CONSIDERATIONS

Contact a licensed professional waste disposal service. Dispose in a manner consistent with federal, state and local environmental regulations.

SECTION 14. TRANSPORT INFORMATION

DOT Shipping Name: Toxic Solids, Inorganic, N.O.S.
DOT UN Number: UN3288
DOT Hazard Class: Class 6.1
DOT Packing Group: PG III
IMDG Shipping Name: Toxic Solids, Inorganic, N.O.S.
IMDG UN Number: UN3288
IMDG Hazard Class: Class 6.1
IMDG Packing Group: PG III
Marine Pollutant: No
IATA: Toxic Solids, Inorganic, N.O.S.
IATA UN Number: UN3288
IATA Hazard Class: Class 6.1
IATA Packing Group: PG II

SECTION 15. REGULATORY INFORMATION

United States
Toxic Substance Control Act (TSCA) listed: Yes
Superfund Amendments and Reauthorization Act (SARA 302) listed: No
Superfund Amendments and Reauthorization Act (SARA 311/312) listed: No
Superfund Amendments and Reauthorization Act (SARA 313) listed: No
European Union
European Inventory of Existing Chemical Substances (EINECS): 205-362-5
Canada
Canadian Domestic Substances List (DSL) listed: No
Canadian Non-Domestic Substances List (NDSL) listed: Yes

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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

Reseach

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- Growth and characterization of Sm3+ doped cerium oxalate single crystals. Minu Mary C, Vimal G, Kamal P. Mani, Gijo Jose, Ittyachen M.A.. Journal of Materials Research and Technology, Volume 5, Issue 3, July–September 2016, Pages 268-274.
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- Structural and thermal investigations on cerium oxalate and derived oxide powders for the preparation of (Th,Ce)O2 pellets. Yüksel Alta?, Hüseyin Tel. Journal of Nuclear Materials, Volume 298, Issue 3, October 2001, Pages 316-320.
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