




| | |
|--|------------------------------|
| (6N) 99.9999% Cadmium Metal | Pricing > |
| (7N) 99.99999% Cadmium Metal | Pricing > |
| Cadmium Balls | Pricing > |
| Cadmium Band | Pricing > |
| Cadmium Bars | Pricing > |
| Cadmium Chunk | Pricing > |
| Cadmium Coil | Pricing > |
| Cadmium Concentrate | Pricing > |
| Cadmium Crucibles | Pricing > |
| Cadmium Cube | Pricing > |
| Cadmium Cylinder | Pricing > |
| Cadmium Disc | Pricing > |
| Cadmium Flake | Pricing > |
| Cadmium Flanges | Pricing > |
| Cadmium Foam | Pricing > |
| Cadmium Foil | Pricing > |
| Cadmium Granules | Pricing > |
| Cadmium Honeycomb | Pricing > |
| Cadmium Ingot | Pricing > |
| Cadmium Lump | Pricing > |
| Cadmium Mesh | Pricing > |
| Cadmium Metal | Pricing > |
| Cadmium Microfoil | Pricing > |
| Cadmium Microleaf | Pricing > |
| Cadmium Nanoparticles | Pricing > |
| Cadmium Nanoprisms | Pricing > |
| Cadmium Nanorods | Pricing > |
| Cadmium Particles | Pricing > |
| Cadmium Parts | Pricing > |
| Cadmium Pellets | Pricing > |

| | |
|---|------------------------------|
| Cadmium Pieces | Pricing > |
| Cadmium Plate | Pricing > |
| Cadmium Powder | Pricing > |
| Cadmium Puck | Pricing > |
| Cadmium Ribbon | Pricing > |
| Cadmium Ring | Pricing > |
| Cadmium Rod | Pricing > |
| Cadmium Rotatable Sputtering Target | Pricing > |
| Cadmium Samples | Pricing > |
| Cadmium Shavings | Pricing > |
| Cadmium Sheet | Pricing > |
| Cadmium Shot | Pricing > |
| Cadmium Single Crystal | Pricing > |
| Cadmium Sleeves | Pricing > |
| Cadmium Slugs | Pricing > |
| Cadmium Specimen | Pricing > |
| Cadmium Spheres | Pricing > |
| Cadmium Sponge | Pricing > |
| Cadmium Spring | Pricing > |
| Cadmium Sputtering Target | Pricing > |
| Cadmium Sticks | Pricing > |
| Cadmium Strip | Pricing > |
| Cadmium Tape | Pricing > |
| Cadmium Tube | Pricing > |
| Cadmium Wafer | Pricing > |
| Cadmium Wire | Pricing > |
| Cadmium Wool | Pricing > |
| Ultra Thin Cadmium Nanoscale Foil | Pricing > |

| | |
|-----------------------------|--------------|
| Linear Formula | Cd |
| Pubchem CID | 23973 |
| MDL Number | MFCD00010914 |
| EC No. | 231-152-8 |
| Beilstein/Reaxys No. | 8137359 |
| SMILES | [Cd] |

| | |
|--------------------------|---|
| Inchl Identifier | InChI=1S/Cd |
| Inchl Key | BDOSMKKIYDKNTQ-UHFFFAOYSA-N |
| Signal Word | Danger |
| Hazard Statements | H228-H330-H341-H350-H361-H372 |
| Hazard Codes | F, T+, Xn |
| Precautionary Statements | P210-P260-P304+P340-P320-P405-P501 |
| Risk Codes | N/A |
| Safety Statements | N/A |
| RTECS Number | EU9800000 |
| Transport Information | UN3179 4.1+6.1/PG II |
| GHS Pictograms | <p>GHS02 Flame</p>  <p>GHS06 Skull and Crossbones</p>  <p>GHS08 Health Hazard</p>  |

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SAFETY DATA SHEET

Date Accessed: 04/25/2024

Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifiers: All applicable American Elements product codes for CAS #7440-43-9

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

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

GHS06 Skull and crossbones

Acute Tox. 2 H330 Fatal if inhaled.

GHS08 Health hazard

Muta. 2 H341 Suspected of causing genetic defects.

Carc. 1B H350 May cause cancer.

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

STOT RE 1 H372 Causes damage to the lung, the kidneys, the reproductive system and the blood through prolonged or repeated exposure. Route of exposure: Oral.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

T+; Very toxic

R26: Very toxic by inhalation.

T; Toxic

Carc. Cat. 2

R45-48/23/25: May cause cancer. Toxic: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

Xn; Harmful

R62-68-63: Possible risk of impaired fertility. Possible risk of irreversible effects. Possible risk of harm to the unborn child.

N; Dangerous for the environment

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Muta. Cat. 3, Repr. Cat. 3

Information concerning particular hazards for human and environment:

N/A

Hazards not otherwise classified

No data available

Label elements

Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labeled according to the CLP regulation.

Hazard pictograms



GHS06 GHS08

Signal word: Danger

Hazard statements

H330 Fatal if inhaled.

H341 Suspected of causing genetic defects.
H350 May cause cancer.
H361 Suspected of damaging fertility or the unborn child.
H372 Causes damage to the lung, the kidneys, the reproductive system and the blood through prolonged or repeated exposure. Route of exposure: Oral.
Precautionary statements
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P284 [In case of inadequate ventilation] wear respiratory protection.
P281 Use personal protective equipment as required.
P320 Specific treatment is urgent (see on this label).
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
WHMIS classification
D1A - Very toxic material causing immediate and serious toxic effects
D2A - Very toxic material causing other toxic effects
Classification system
HMIS ratings (scale 0-4)
(Hazardous Materials Identification System)
Health (acute effects) = 1
Flammability = 0
Physical Hazard = 0
Other hazards
Results of PBT and vPvB assessment
PBT: N/A
vPvB: N/A
Substances
CAS No. / Substance Name:
7440-43-9 Cadmium
Identification number(s):
EC number: 231-152-8
Index number: 048-002-00-0

SECTION 4. FIRST AID MEASURES

Description of first aid measures
General information
Immediately remove any clothing soiled by the product.
Remove breathing apparatus only after contaminated clothing has been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.
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
Special powder for metal fires. Do not use water.
For safety reasons unsuitable extinguishing agents
Water
Special hazards arising from the substance or mixture
If this product is involved in a fire, the following can be released:
Cadmium 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
Environmental precautions:
Do not allow material to be released to the environment without official permits.
Do not allow product to enter drains, sewage systems, or other water courses.
Do not allow material to penetrate the ground or soil.
Methods and materials for containment and cleanup:
Dispose of contaminated material as waste according to section 13.
Ensure adequate ventilation.
Prevention of secondary hazards:

No special measures required.
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
Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation at the workplace.
Open and handle container with care.
Information about protection against explosions and fires:

No data available

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:

No data available

Further information about storage conditions:

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: 7440-43-9 Cadmium (100.0%)

PEL (USA) Long-term value: 0.005 mg/m³ as Cd; see 29 CFR 1910.1027

REL (USA) See Pocket Guide App. A

TLV (USA) Long-term value: 0.01 0.002* mg/m³ as Cd; *respirable fraction; BEI

EL (Canada) Long-term value: 0.01 mg/m³ as Cd; ACIGH A1, IARC 1

EV (Canada) Long-term value: 0.01 0.002* mg/m³

*respirable

Ingredients with biological limit values: 7440-43-9

Cadmium (100.0%)

BEI (USA) 5 µg/g creatinine

Medium: urine

Time: not critical

Parameter: Cadmium (background)

5 µg/L

Medium: blood

Time: not critical

Parameter: Cadmium (background)

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.

Store protective clothing separately.

Maintain an ergonomically appropriate working environment.

Breathing equipment:

Use self-contained respiratory protective device in emergency situations.

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.

Material of gloves

Nitrile rubber, NBR

Penetration time of glove material (in minutes)

No data available

Eye protection: Safety glasses

Body protection: Protective work clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance:

Form: Solid in various forms

Color: Silvery-white

Odor: No data available

Odor threshold: No data available.

pH: N/A

Melting point/Melting range: 321 °C (610 °F)

Boiling point/Boiling range: 765 °C (1409 °F)

Sublimation temperature / start: No data available

Flammability (solid, gas): No data available.
Ignition temperature: No data available
Decomposition temperature: No data available
Autoignition: No data available.
Danger of explosion: No data available.
Explosion limits:
Lower: No data available
Upper: No data available
Vapor pressure at 180 °C (356 °F): 0.00013 hPa
Density at 20 °C (68 °F): 8.65 g/cm³ (72.184 lbs/gal)
Bulk density at 20 °C (68 °F): 2700 kg/m³
Relative density: No data available.
Vapor density: N/A
Evaporation rate: N/A
Solubility in Water (H₂O): No data available
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
No data available
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
No dangerous reactions known
Conditions to avoid
No data available
Incompatible materials:
No data available
Hazardous decomposition products:
Cadmium oxide

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity:
Fatal if inhaled.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.

LD/LC50 values that are relevant for classification: No data

Skin irritation or corrosion:

Powder: irritant effect

Eye irritation or corrosion:

Powder: irritant effect

Sensitization: No sensitizing effects known.

Germ cell mutagenicity:

Suspected of causing genetic defects.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.

Carcinogenicity:

May cause cancer.

IARC-1: Carcinogenic to humans: sufficient evidence of carcinogenicity.

EPA-B1: Probable human carcinogen, limited evidence of carcinogenicity from epidemiologic studies.

Carcinogen as defined by OSHA.

ACGIH A2: Suspected human carcinogen: Agent is carcinogenic in experimental animals at dose levels, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) considered relevant to worker exposure. Available epidemiologic studies are conflicting or insufficient to confirm an increased risk of cancer in exposed humans.

NTP-K: Known to be carcinogenic: sufficient evidence from human studies.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this substance.

Reproductive toxicity:

Suspected of damaging fertility or the unborn child.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance.

Specific target organ system toxicity - repeated exposure:

Causes damage to the lung, the kidneys, the reproductive system and the blood through prolonged or repeated exposure. Route of exposure: Oral.

Specific target organ system toxicity - single exposure: No effects known.

Aspiration hazard: No effects known.

Subacute to chronic toxicity:

The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.

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

Ecotoxicological effects:

Remark:

Very toxic for aquatic organisms

Additional ecological information:

Do not allow material to be released to the environment without official permits.

Do not allow product to reach groundwater, water courses, or sewage systems, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

May cause long lasting harmful effects to aquatic life.

Avoid transfer into the environment.

Very toxic for aquatic organisms

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, ADN, IMDG, IATA

N/A

UN proper shipping name

DOT, ADN, IMDG, IATA

N/A

Transport hazard class(es)

DOT, ADR, ADN, IMDG, IATA

Class

N/A
Packing group
DOT, IMDG, IATA
N/A
Environmental hazards:
Environmentally hazardous substance, solid
Special precautions for user
N/A
Transport in bulk according to Annex II of
MARPOL73/78 and the IBC Code
N/A
Transport/Additional information:
DOT
Marine Pollutant (DOT):
No

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental
regulations/legislation specific for the substance or
mixture
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 Domestic Substances List (DSL).
SARA Section 313 (specific toxic chemical listings)
7440-43-9 Cadmium
California Proposition 65
Prop 65 - Chemicals known to cause cancer
7440-43-9 Cadmium
Prop 65 - Developmental toxicity
Substance is not listed.
Prop 65 - Developmental toxicity, female
Substance is not listed.
Prop 65 - Developmental toxicity, male
7440-43-9 Cadmium
Information about limitation of use:
Workers are not allowed to be exposed to this
hazardous material. Exceptions can be made by the
authorities in certain cases.
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.
This substance is included in the Candidate List of
Substances of Very High Concern (SVHC) according
to Regulation (EC) No. 1907/2006 (REACH).
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 Authorization for use)
Substance is not listed.
REACH - Pre-registered substances
Substance is 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 MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.
