


[Cadmium Tetrafluoroborate Solution](#)

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|---------------------------------|--|
| Linear Formula | Cd(BF ₄) ₂ |
| Pubchem CID | 12886773 |
| MDL Number | MFCD00015993 |
| EC No. | 238-490-5 |
| IUPAC Name | cadmium(2+); ditetrafluoroborate |
| SMILES | [B-](F)(F)(F)F.[B-](F)(F)(F)F.[Cd+2] |
| Inchl Identifier | InChI=1S/2BF4.Cd/c2*2-1(3,4)5;/q2*-1;+2 |
| Inchl Key | NXOFSPIMFJTFSE-UHFFFAOYSA-N |
| Signal Word | Danger |
| Hazard Statements | H301+311+331-H335-H319-H315-H351 |
| Hazard Codes | T, Xi, Xn |
| Precautionary Statements | P260-P271-P280 |
| Flash Point | 113 °C |
| Risk Codes | R23/24/25 R36/37/38 R40 |
| Safety Statements | N/A |
| RTECS Number | EV0525000 |
| Transport Information | UN 2570 6.1/PG III |
| GHS Pictograms | <p>GHS06 Skull and Crossbones</p>  |

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SAFETY DATA SHEET

Date Accessed: 05/20/2024

Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifiers: All applicable American Elements product codes for CAS #14486-19-2

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 under CHIP:
T: R23/24/25; Xi: R36/37/38; Xn: R40
Classification under CLP:
Acute Tox. 3: H301+311+331; STOT SE 3: H335; Eye Irrit. 2: H319; Skin Irrit. 2: H315;
Carc. 2: H351
Most important adverse effects:
Toxic by inhalation, in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin. Limited evidence of a carcinogenic effect.
Hazard statements:
H301+311+331: Toxic if swallowed, in contact with skin or if inhaled.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H335: May cause respiratory irritation.
Signal words:
Danger



Precautionary statements:
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P260: Do not breathe vapours.
P271: Use only outdoors or in a well-ventilated area.
Risk phrases:
R23/24/25: Toxic by inhalation, in contact with skin and if swallowed.

R36/37/38: Irritating to eyes, respiratory system and skin.
R40: Limited evidence of a carcinogenic effect.
PBT:
This substance is not identified as a PBT substance

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical identity:
CADMIUM(II) TETRAFLUOROBORATE, 50%
AQUEOUS SOLUTION

SECTION 4. FIRST AID MEASURES

Skin contact:

Remove all contaminated clothes and footwear immediately unless stuck to skin. Drench the affected skin with running water for 10 minutes or longer if substance is still on skin. Transfer to hospital if there are burns or symptoms of poisoning.

Eye contact:

Bathe the eye with running water for 15 minutes. Transfer to hospital for specialist examination.

Ingestion:

Wash out mouth with water. Do not induce vomiting. If conscious, give half a litre of water to drink immediately. If unconscious, check for breathing and apply artificial respiration if necessary. If unconscious and breathing is OK, place in the recovery position. Transfer to hospital as soon as possible.

Inhalation:

Remove casualty from exposure ensuring one's own safety whilst doing so. If conscious, ensure the casualty sits or lies down. If unconscious and breathing is OK, place in the recovery position. If unconscious, check for breathing and apply artificial respiration if necessary. If breathing becomes bubbly, have the casualty sit and provide oxygen if available. Transfer to hospital as soon as possible.

Skin contact:

There may be redness or whiteness of the skin in the area of exposure. Irritation or pain may occur at the site of contact. Absorption through the skin may be fatal.

Eye contact:

There may be severe pain. The eyes may water profusely.

Ingestion:

There may be soreness and redness of the mouth and throat. There may be vomiting. Convulsions may

occur. There may be loss of consciousness.

Inhalation:

There may be shortness of breath with a burning sensation in the throat. Absorption through the lungs can occur causing symptoms similar to those of ingestion. Convulsions may occur. There may be loss of consciousness.

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media:

Carbon dioxide, dry chemical powder, foam. Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

Exposure hazards:

Toxic. In combustion emits toxic fumes. Hydrogen fluoride (HF). Borane/boron oxides.

Advice for fire-fighters:

Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Notify the police and fire brigade immediately. If outside do not approach from downwind. If outside keep bystanders upwind and away from danger point. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Do not attempt to take action without suitable protective clothing - see section 8 of SDS. Turn leaking containers leak-side up to prevent the escape of liquid.

Environmental precautions:

Do not discharge into drains or rivers. Contain the spillage using bunding.

Clean-up procedures:

Clean-up should be dealt with only by qualified personnel familiar with the specific substance. Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

SECTION 7. HANDLING AND STORAGE

Handling requirements:

Avoid direct contact with the substance. Ensure there is exhaust ventilation of the area. Avoid the formation

or spread of mists in the air. Only use in fume hood.
Storage conditions:
Store in cool, well ventilated area. Keep container tightly closed.
Suitable packaging:
Must only be kept in original packaging.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering measures:
Ensure there is exhaust ventilation of the area.
Respiratory protection:
Self-contained breathing apparatus must be available in case of emergency.
Hand protection:
Impermeable gloves.
Eye protection:
Safety glasses with side-shields. Ensure eye bath is to hand.
Skin protection:
Impermeable protective clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

State: Solution
Odour: Odourless
Solubility in water: Highly soluble

SECTION 10. STABILITY AND REACTIVITY

Reactivity:
Stable under recommended transport or storage conditions.
Chemical stability:
Stable under normal conditions.
Hazardous reactions:
Hazardous reactions will not occur under normal transport or storage conditions.
Conditions to avoid:
Heat. Hot surfaces. Flames.
Materials to avoid:
Strong oxidising agents. Strong acids.
Hazardous decomposition products:
In combustion emits toxic fumes. Boron Oxides
Hydrogen fluoride (HF).

SECTION 11. TOXICOLOGICAL INFORMATION

Toxicity values:

Route - ORAL

Species - RAT

Test - LD50

Value - 250

Units - mg/kg

Relevant hazards for substance:

Acute toxicity (ac. tox. 3) - INH DRM ING

Skin corrosion/irritation - DRM

Serious eye damage/irritation - OPT

Carcinogenicity --

STOT-single exposure - INH

Skin contact:

There may be redness or whiteness of the skin in the area of exposure. Irritation or pain may occur at the site of contact. Absorption through the skin may be fatal.

Eye contact:

There may be severe pain. The eyes may water profusely.

Ingestion:

There may be soreness and redness of the mouth and throat. There may be vomiting. Convulsions may occur. There may be loss of consciousness.

Inhalation:

There may be shortness of breath with a burning sensation in the throat. Absorption through the lungs can occur causing symptoms similar to those of ingestion. Convulsions may occur. There may be loss of consciousness.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity values: No data available

Persistence and degradability: No data available

Bioaccumulative potential: No data available

Mobility: No data available

PBT identification: This substance is not identified as a PBT substance

Other adverse effects: No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal operations:

MATERIAL SHOULD BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS

Disposal of packaging:

Dispose of as special waste in compliance with local and national regulations Observe all federal, state and local environmental regulations.

NB:

The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

SECTION 14. TRANSPORT INFORMATION

UN number: UN2570

Shipping name: CADMIUM COMPOUND

Transport class: 6.1

Packing group: III

Environmentally hazardous: No

Marine pollutant: No

Tunnel code: E

Transport category: 2

SECTION 15. REGULATORY INFORMATION

Chemical safety assessment:

A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

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.
