

Common Name: **CADMIUM BROMIDE**

Synonyms: Cadmium Dibromide

CAS No: 7789-42-6

 Molecular Formula: CdBr₂

RTK Substance No: 0307

Description: White to yellowish, odorless, crystalline solid which changes to a powder on exposure to dry air

HAZARD DATA

| Hazard Rating | Firefighting | Reactivity |
|--------------------------------------|--|--|
| 4 - Health | Extinguish fire using an agent suitable for type of surrounding fire. Cadmium Bromide itself does not burn. | A mixture of Cadmium Bromide and POTASSIUM may explode on impact. |
| 0 - Fire | POISONOUS GASES ARE PRODUCED IN FIRE, including <i>Cadmium Oxide</i> and <i>Hydrogen Bromide</i> . | Cadmium Bromide reacts with SULFIDES, and will form Acids in WATER. |
| 0 - Reactivity | Use water spray to keep fire-exposed containers cool. | Cadmium Bromide is not compatible with SULFURIC ACID; ALKALI; AMMONIA; AMINES; AMIDES; EPICHLOROHYDRIN; ISOCYANATES; NITROMETHANE; and VINYL ACETATE. |
| DOT#: UN 2570 | | |
| ERG Guide #: 154 | | |
| Hazard Class: 6.1 (Poison) | Cadmium Bromide may ignite combustibles (wood, paper and oil). | |

SPILL/LEAKS

Isolation Distance:

Spills: 25 meters (75 yards)

Fire: 800 meters (1/2 mile)

Moisten spilled material first or use a HEPA-filter vacuum for clean-up.

Collect powdered material in the most convenient and safe manner and deposit in sealed containers.

DO NOT wash into sewer.

Toxic to aquatic organisms. Hazardous to the environment and persists in the environment.

PHYSICAL PROPERTIES

Odor Threshold: Odorless

Flash Point: Nonflammable; dust may be explosive

Specific Gravity: 5.2 (water = 1)

Water Solubility: Soluble

Boiling Point: 1,585°F (863°C) (decomposes)

Freezing Point: 1,053°F (567°C)

Molecular Weight: 272.22

EXPOSURE LIMITS

OSHA: 0.005 mg/m³, 8-hr TWA

NIOSH: Lowest feasible concentration

ACGIH: 0.01 mg/m³, 8-hr TWA (total particulate)
0.002 mg/m³, 8-hr TWA (respirable fraction)

IDLH: 9 mg/m³
(All of the above are for Cadmium)

PROTECTIVE EQUIPMENT

Gloves: Nitrile and Neoprene

Coveralls: DuPont Tyvek®

Respirator: >0.005 mg/m³ - APR with High efficiency filters
>0.05 mg/m³ - Supplied air

HEALTH EFFECTS

Eyes: Irritation

Skin: Irritation

Inhalation: Nose, throat and lung irritation with coughing and shortness of breath
Nausea, vomiting, headache, fever and chills, aches, and chest tightness

Chronic: Cadmium and Cadmium compounds cause lung and prostate cancer in humans

FIRST AID AND DECONTAMINATION

Remove the person from exposure.

Flush eyes with large amounts of water for at least 15 minutes. Remove contact lenses if worn.

Remove contaminated clothing and wash contaminated skin with water.

Begin artificial respiration if breathing has stopped and CPR if necessary.

Transfer to a medical facility.

Medical observation is recommended as symptoms may be delayed.