

Common Name: **CADMIUM OXIDE**

Synonyms: Cadmium Monoxide

CAS No: 1306-19-0

Molecular Formula: CdO

RTK Substance No: 2200

Description: Odorless, white powder or a red or brown crystal

HAZARD DATA

Hazard Rating	Firefighting	Reactivity
<p>4 - Health</p> <p>0 - Fire</p> <p>0 - Reactivity</p> <p>DOT#: UN 2570</p> <p>ERG Guide #: 154</p> <p>Hazard Class: 6.1 (Poison)</p>	<p>Extinguish fire using an agent suitable for type of surrounding fire. Cadmium Oxide itself does not burn.</p> <p>POISONOUS GASES ARE PRODUCED IN FIRE, including <i>Cadmium</i>.</p> <p>Use water spray to keep fire-exposed containers cool.</p> <p>Cadmium Oxide may ignite combustibles (wood, paper and oil).</p>	<p>Cadmium Oxide reacts violently with MAGNESIUM, ALUMINUM, and AMMONIUM PERCHLORATE, when heated, to cause fires and explosions.</p> <p>Cadmium Oxide explodes or ignites on contact with HYDRAZINIUM NITRATE; HYDROGEN PEROXIDE; HYDROGEN SULFIDES; and LITHIUM.</p> <p>Cadmium Oxide is not compatible with PHOSPHORUS; SULFUR; SULFUR OXIDES; SELENIUM; and ZINC.</p> <p>Contact with ACIDS releases flammable and explosive <i>Hydrogen gas</i>.</p>

SPILL/LEAKS

Isolation Distance:

Spills: 25 meters (75 feet)

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.

Bioaccumulation may occur in plants and seafood.

Severe marine pollutant.

PHYSICAL PROPERTIES

Odor Threshold:	Odorless
Flash Point:	Nonflammable
Vapor Pressure:	1 mm Hg at 1,832°F (1,000°C)
Specific Gravity:	8.15 (water = 1)
Water Solubility:	Insoluble
Boiling Point:	2,838°F (1,559°C)
Melting Point:	1,652° to 1,832°F (900° to 1,000°C)
Molecular Weight:	128.4

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 (dust or fume)

(All of the above are for *Cadmium*)

PROTECTIVE EQUIPMENT

Gloves:	Neoprene or Nitrile
Coveralls:	DuPont Tyvek®
Respirator:	>0.005 mg/m ³ - APR with High efficiency filters >0.05 mg/m ³ - 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 soap and 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.