

# Safety Data Sheet



## 1: Identification

### 1.1: Product Identifier

Product Name: CdI2

Product Number(s): 1CDI2-0005F

CAS Number: 7790-80-9

SDS Document Number: 000036

### 1.2: Recommended Uses and Restrictions

Recommended Uses

Manufacture of substances

Restrictions

Not for food or drug use.

### 1.3: Supplier Contact Information

APL Engineered Materials, Inc.

2401 N. Willow Rd.

Urbana, IL 61802

Phone: 217-367-1340

Fax: 217-367-9084

### 1.4: Emergency Phone Number

United States: 800-255-3924

International: +01-813-248-0585

## 2: Hazards Identification

### 2.1: Classifications

Acute Aquatic Toxicity - Category 1

Acute Toxicity, Inhalation - Category 3

Acute Toxicity, Oral - Category 3

Carcinogenicity - Category 1A

Chronic Aquatic Toxicity - Category 1

Specific Target Organ Toxicity - Repeated Exposure - Category 2

### 2.2: GHS Label Elements

Pictograms



Signal Word: Danger

Hazard Statements

- H301: Toxic if swallowed.
- H331: Toxic if inhaled.
- H350: May cause cancer.
- H373: May cause damage to lungs and kidneys through prolonged or repeated exposure. ingestion and inhalation
- H410: Very toxic to aquatic life with long lasting effects.

Precautionary Statements

- P201: Obtain special instructions before use.
- P202: Do not handle until all safety precautions have been read and understood.
- P260: Do not breathe dust.
- P264: Wash hands thoroughly after handling.
- P270: Do not eat, drink or smoke when using this product.
- P271: Use only outdoors or in a well-ventilated area.
- P273: Avoid release to the environment.
- P281: Use personal protective equipment as required.
- P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P308 + P313: IF EXPOSED or concerned: Get medical advice/attention.
- P330: Rinse mouth.
- P391: Collect spillage.
- P403 + P233: Store in a well-ventilated place. Keep container tightly closed.
- P405: Store locked up.
- P501: Dispose of contents/container to licensed disposal facility.

2.3: Hazards Not Otherwise Classified or Not Covered by GHS

None.

2.4: Amount(s) of substances with unknown toxicity

None

**3: Composition/Information on Ingredients**

| 3.1: .Ingredient | .Weight% | .Formula | .CAS Number | .Mol Wt | .EC Number |
|------------------|----------|----------|-------------|---------|------------|
| CdI2             | 100      | CdI2     | 7790-80-9   | 366.22  | 232-223-6  |

3.2: Other Hazardous components

none

3.3: Trade Secret Disclaimer

none

3.4: Synonyms

Cadmium Iodide  
cadmium diiodide

**4: First Aid Measures**

4.1: First Aid

General

- Remove person from area of exposure and remove any contaminated clothing
- Consult with physician and provide this Safety Data Sheet

In contact with eyes

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.  
Seek medical attention if irritation develops or persists

In contact with skin

Wash thoroughly with soap and plenty of water. Remove all contaminated clothing for proper laundering. Seek medical attention if irritation develops or persists.

If swallowed

If conscious and alert, rinse mouth and drink 2-4 cupfuls of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get medical aid.

If inhaled

Remove from exposure to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid.  
If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

#### 4.2: Most important symptoms and effects; acute and delayed

Possible human carcinogen.

Toxic if swallowed.

Stomach irregularities based on human evidence.

Known human carcinogen.

May cause damage to organs through repeated or prolonged exposure.

Toxic if inhaled.

#### 4.3: Indication of any immediate medical attention and special treatment needed

If swallowed: Immediately call a POISON CENTER or doctor/ physician.

If inhaled : Immediately call a POISON CENTER or doctor/ physician.

## 5: Fire Fighting Measures

#### 5.1: Fire extinguishing media

carbon dioxide

dry chemical

water or alcohol-resistant foam

#### 5.2: Specific hazards arising from the substance or mixture

cadmium/cadmium oxide

hydroiodic acid and hydroiodic acid fumes

#### 5.3: Special protective equipment and precautions for firefighters.

Wear self contained breathing apparatus for fire fighting if necessary

## 6: Accidental Release Measures

#### 6.1: Personal precautions, protective equipment, and emergency procedures.

For personal protection see section 8.

Avoid dust formation.

Avoid breathing dust.

Evacuate personnel to safe areas.

Ensure adequate ventilation.

Use personal protective equipment.

#### 6.2: Methods and materials for containment and cleaning up.

Keep in suitable, closed containers for disposal.

Sweep up and shovel.

#### 6.3: Environmental precautions

Do not let product enter drains.

#### 6.4: Disposal

Dispose of in accordance with local regulations.

See section 13.

## 7: Handling and Storage

#### 7.1: Precautions for safe handling

Avoid formation of dust and aerosols.

See precautionary statements in section 2.2.

Provide appropriate exhaust ventilation at places where dust is formed.

Avoid contact with skin and eyes.

#### 7.2: Conditions for safe storage

Keep container tightly closed.

Store under inert gas.

Store in a dry and well-ventilated place.

Store in the dark to preserve product quality.

Store away from moisture.

#### 7.3: Incompatibilities

oxidizing agents

## 8: Exposure Controls/Personal Protection

#### 8.1: Control parameters

OSHA permissible exposure limit (PEL)

0.005 mg/m<sup>3</sup> (as Cd)

ACGIH threshold limit value (TLV)

0.002 mg/m<sup>3</sup> (as Cd)

NIOSH recommended exposure limit (REL)

not listed

#### 8.2: Engineering controls

Use adequate ventilation to keep airborne concentrations low

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower

#### 8.3: Personal protective equipment

Eyes

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166

Skin

Wear appropriate, chemical-resistant protective gloves to prevent skin exposure.

#### Clothing

Wear appropriate protective clothing to prevent skin exposure

#### Respirator

Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149.  
Always use a NIOSH or European Standard EN 149 approved respirator when necessary

## 9: Physical and Chemical Properties

### 9.a: Appearance

State: Solid

Form: powder or spheres

Color: White

9.b: Odor: no data available

9.c: Odor threshold: no data available

9.d: pH: no data available

9.e: Melting point / freezing point: 388 °C (730 °F)

9.f: Initial boiling point and range: 787 °C (1,449 °F)

9.g: Flashpoint: no data available

9.h: Evaporation rate: no data available

9.i: Flammability (solid, gas): no data available

9.j: Upper/lower flammability or explosive limits: no data available

9.k: Vapor pressure: no data available

9.l: Vapor density: no data available

9.m: Relative density: 5.67 g/mL at 25 °C (77 °F)

9.n: Water Solubility: no data available

9.o: Partition coefficient: n-octanol/water: no data available

9.p: Auto-ignition temperature: no data available

9.q: Decomposition temperature: no data available

9.r: Viscosity: no data available

## 10: Stability and Reactivity

### 10.1: Reactivity

no data available

### 10.2: Chemical stability

Stable under recommended storage conditions.

### 10.3: Possibility of hazardous reactions

no data available

### 10.4: Conditions to avoid

exposure to water

In the event of fire: see section 5

exposure to light (may affect product quality)

#### 10.5: Incompatible materials

See section 7.3.

#### 10.6: Hazardous decomposition products

Other decomposition products - no data available

In the event of fire: see section 5.2

## 11: Toxicological Information

### 11.1: Toxicity data

Acute toxicity - Oral

LD50 Oral - rat - 222 mg/kg.

Acute toxicity - Dermal

no data available

Acute toxicity - Inhalation

No data available.

Skin corrosion/irritation

no data available

Eye damage/irritation

No data available.

Respiratory irritation

No data available.

Germ cell mutagenicity

no data available

Reproductive toxicity

no data available

Specific organ toxicity - single exposure

No data available.

Specific organ toxicity - repeated exposure

May cause damage to organs through repeated or prolonged exposure.

Aspiration hazard

No data available.

Additional information

RTECS: EV1290000

ACGIH carcinogenicity

The ACGIH has identified a component of this product present at levels greater than or equal to 0.1% as a probable, possible or confirmed human carcinogen.

IARC carcinogenicity

Group 1: Carcinogenic to humans.

NTP carcinogenicity

The NTP has identified a component of this product present at levels greater than or equal to 0.1% as a probable, possible or confirmed human carcinogen.

OSHA carcinogenicity

OSHA regulated carcinogen.

#### 11.2: Routes of exposure

eyes  
oral  
skin

#### 11.3: Symptoms of exposure

See section 4.2

#### 11.4: Delayed and immediate effects of exposure

Known human carcinogen

Prolonged exposure to iodides may produce iodism in sensitive individuals. Symptoms of exposure include skin rash, running nose, headache and irritation of the mucous membrane. For severe cases the skin may show pimples, boils, hives, blisters and black and blue spots. Iodides are readily diffused across the placenta. Neonatal deaths from respiratory distress secondary to goiter have been reported. Iodides have been known to cause drug-induced fevers, which are usually of short duration.

Presumed human reproductive toxicant

## 12: Ecological Information

#### 12.1: Ecotoxicity

Toxicity to fish

No data available

Toxicity to daphnia and other aquatic invertebrates

No data available

Toxicity to algae/bacteria

No data available

#### 12.2: Persistence and degradability

no data available

#### 12.3: Bioaccumulative potential

no data available

#### 12.4: Mobility in soil

no data available

#### 12.5: Other effects

Very toxic to aquatic life with long lasting effects.

## 13: Disposal Considerations

#### 13.1: Waste treatment methods

No data available

#### 13.2: Safe handling

See section 7.1 .

#### 13.3: Product disposal

Contact a licensed professional waste disposal service to dispose of this material.

#### 13.4: Packaging disposal

Dispose of as unused product.

## 14: Transport Information

### 14.1: DOT(US)

UN Number: 2570

Proper Shipping Name: Cadmium compounds (Cadmium iodide)

Shipping Class(es): 6.1

Marine Pollutant: Yes

### 14.2: IMDG

UN Number: 2570

Proper Shipping Name: Cadmium compounds (Cadmium iodide)

Packing Group: III

Shipping Class(es): 6.1

Marine Pollutant: Yes

### 14.3: IATA

UN Number: 2570

Proper Shipping Name: Cadmium compounds (Cadmium iodide)

Packing Group: III

Shipping Class(es): 6.1

### 14.4: Special Shipping Precautions

None

## 15: Regulatory Information

### 15.1: TSCA inventory

This material is listed on the TSCA inventory.

### 15.2: SARA 302 components

This material is not subject to the reporting requirements of SARA Title III, Section 302.

### 15.3: SARA 313 components

This material is subject to the reporting requirements of SARA Title III, Section 313.

### 15.4: SARA 313/312 hazards

Chronic health hazard.

Acute health hazard.

### 15.5: Other information

Pennsylvania Right To Know Components -This product contains materials listed on the Pennsylvania Right to Know list

Massachusetts Right To Know Components - This product contains materials listed on the Massachusetts Right to Know list

New Jersey Right To Know Components -This product contains materials listed on the New Jersey Right to Know list

California Prop. 65 Components - This product does contain chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.



## 16: Additional Information

### 16.1: NFPA

Health: 2

Fire: 0

Reactivity: 0

Special:

### 16.2: HMIS

Health: 2

Chronic: \*

Flammability: 0

Physical Hazard: 0

### 16.3: Disclaimers

The information herein is believed to be accurate and reliable as of the date compiled. However, APL Engineered Materials, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information on this data sheet or any use of the product based upon this information.

For industrial use only. Not for drug, household or other uses

### 16.4: References

Information contained on this SDS sheet was obtained from some or all of the following sources: American Conference of Governmental Industrial Hygienists (ACGIH), TLVs and BEIs; National Institute for Occupational Safety and Health (NIOSH), Pocket Guide to Chemical Hazards; European Chemicals Agency, <http://echa.europa.eu/>; The National Institute of Health, U.S National Library of Medicine, TOXNET, Toxicology Data Network; and the Registry of Toxic Effects of Chemical Substances (RTECS) database.

### 16.5: Version

Preparation Date: 5/22/2015

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