

## Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS)

### SECTION 1: Identification

#### 1.1. Product Identifier

**Trade Name or Designation:** Cadmium Chloride, 10% (w/v), with Bromocresol Green Indicator

**Product Number:** 1666

**Other Identifying Product Numbers:** 1666-1

#### 1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

#### 1.3. Details of the Supplier of the Safety Data Sheet

**Company:** Ricca Chemical Company

**Address:** 448 West Fork Drive

Arlington, TX 76012 USA

**Telephone:** 888-467-4222

#### 1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA) 800-424-9300  
CHEMTREC (International) 1+ 703-527-3887

### SECTION 2: Hazard(s) Identification

#### 2.1. Classification of the Substance or Mixture

For the full text of the Hazard and Precautionary Statements listed below, see Section 16.

Hazard Class	Category	Hazard Statements	Precautionary Statements:
Hazardous to the Aquatic Environment (Acute)	Category 2	H401	P273, P501
Hazardous to the Aquatic Environment (Chronic)	Category 2	H411	P273, P391, P501

#### 2.2. GHS Label Elements

**Pictograms:**



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**Signal Word:**

**Hazard Statements:**

Hazard Number	Hazard Statement
H401	Toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

**Precautionary Statements:**

Precautionary Number	Precautionary Statement
P273	Avoid release to the environment.
P391	Collect spillage.
P501	Dispose of contents in accordance with local, state, federal and international regulations.

## 2.4. Hazards not Otherwise Classified or Covered by GHS

Data not available.

## SECTION 3: Composition / Information on Ingredients

### 3.1. Components of Substance or Mixture

Chemical Name	Formula	Molecular Weight	CAS Number	Weight%
Water	H <sub>2</sub> O	18.01 g/mol	7732-18-5	90.70
Cadmium Chloride Hemi-pentahydrate	2CdCl <sub>2</sub> ·5H <sub>2</sub> O	456.71 g/mol	7790-78-5	9.30
Bromocresol Green, Sodium Salt	C <sub>21</sub> H <sub>13</sub> Br <sub>4</sub> O <sub>5</sub> Na	705.96 g/mol	62625-32-5	< 0.1

## SECTION 4: First-Aid Measures

### 4.1. General First Aid Information

**Eye Contact:** May cause irritation, redness, pain, and tearing.

**Inhalation:** Not expected to require first aid. If necessary, remove to fresh air.

**Skin Contact:** May cause irritation, redness, and pain.

**Ingestion:** Dilute immediately with water or milk. Induce vomiting. Call a physician.

### 4.2. Most Important Symptoms and Effects, Acute and Delayed

WARNING! Hazardous liquid. Contains a known carcinogen. Avoid ingestion and contact with skin, eyes, or clothing. If ingested, dilute immediately with water or milk and induce vomiting. Call a physician. Wash areas of contact with plenty of water. For eyes, get medical attention.

EYE CONTACT: May cause irritation, redness, pain, and tearing. SKIN CONTACT: May cause irritation, redness, and pain. CHRONIC EFFECTS / CARCINOGENICITY: Chronic exposure may affect kidneys and liver.

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### 4.3. Medical Attention or Special Treatment Needed

Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Flush with plenty of water for at least 15 minutes. Call a physician if irritation develops. Dilute immediately with water or milk. Induce vomiting. Call a physician.

## SECTION 5: Fire-Fighting Measures

### 5.1. Extinguishing Media

Use any means suitable for extinguishing surrounding fire.

### 5.2. Specific Hazards Arising from the Substance or Mixture

Not considered to be a fire or explosion hazard.

### 5.3. Special Protective Equipment for Firefighters

Use protective clothing and NIOSH-approved breathing equipment appropriate for the surrounding fire.

## SECTION 6: Accidental Release Measures

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear appropriate PPE for the size and nature of the spill. As a general rule, wear safety glasses and gloves.

### 6.2. Cleanup and Containment Methods and Materials

Absorb with suitable inert material (vermiculite, dry sand, etc) and place in a chemical waste container for proper disposal. Do not flush to sewer. Dispose of in accordance with local regulations.

## SECTION 7: Handling and Storage

### 7.1. Precautions for Safe Handling and Storage Conditions

As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage.

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## SECTION 8: Exposure Controls / Personal Protection

### 8.1 Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Cadmium Chloride Hemi-pentahydrate	PEL	USA	"5 µg/m³ TWA (See 29 CFR 1910.1027, as Cd); 2.5 µg/m³ Action Level (as Cd)" As Cadmium compounds [RR-00559-4]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Cadmium Chloride Hemi-pentahydrate	TLV-TWA	USA	"0.01 mg/m³ TWA (as Cd); 0.002 mg/m³ TWA (respirable particulate matter, as Cd)" As Cadmium compounds [RR-00559-4]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Cadmium Chloride Hemi-pentahydrate	TLV-TWA	USA	"0.01 mg/m³ TWA (as Cd); 0.002 mg/m³ TWA (respirable particulate matter, as Cd)" As Cadmium compounds [RR-00559-4]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Cadmium Chloride Hemi-pentahydrate	PEL	USA	"5 µg/m³ TWA (See 29 CFR 1910.1027, as Cd); 2.5 µg/m³ Action Level (as Cd)" As Cadmium compounds [RR-00559-4]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Cadmium Chloride Hemi-pentahydrate	PEL	USA	5 µg/m³ TWA (See 29 CFR 1910.1027, as Cd); 2.5 µg/m³ Action Level (as Cd)	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Cadmium Chloride Hemi-pentahydrate	TLV-TWA	USA	0.01 mg/m³ TWA (as Cd); 0.002 mg/m³ TWA (respirable particulate matter, as Cd)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Cadmium Chloride Hemi-pentahydrate	TLV-TWA	USA	"0.01 mg/m³ TWA (as Cd); 0.002 mg/m³ TWA (respirable particulate matter, as Cd)" As Cadmium compounds [RR-00559-4]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

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Cadmium Chloride Hemi-pentahydrate PEL	USA	"5 µg/m³ TWA (See 29 CFR 1910.1027, as Cd); 2.5 µg/m³ Action Level (as Cd)" As Cadmium compounds [RR-00559-4]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Cadmium Chloride Hemi-pentahydrate TLV-TWA	USA	"0.01 mg/m³ TWA (as Cd); 0.002 mg/m³ TWA (respirable particulate matter, as Cd)" As Cadmium compounds [RR-00559-4]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Cadmium Chloride Hemi-pentahydrate PEL	USA	"5 µg/m³ TWA (See 29 CFR 1910.1027, as Cd); 2.5 µg/m³ Action Level (as Cd)" As Cadmium compounds [RR-00559-4]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Cadmium Chloride Hemi-pentahydrate PEL	USA	"5 µg/m³ TWA (See 29 CFR 1910.1027, as Cd); 2.5 µg/m³ Action Level (as Cd)" As Cadmium compounds [RR-00559-4]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Cadmium Chloride Hemi-pentahydrate TLV-TWA	USA	"0.01 mg/m³ TWA (as Cd); 0.002 mg/m³ TWA (respirable particulate matter, as Cd)" As Cadmium compounds [RR-00559-4]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

### 8.2. Exposure Controls

**Engineering Controls:** No specific controls are needed. Normal room ventilation is adequate.

**Respiratory Protection:** Normal room ventilation is adequate.

**Skin Protection:** Chemical resistant gloves.

**Eye Protection:** Safety glasses or goggles.

### 8.3. Personal Protective Equipment

Normal room ventilation is adequate. Chemical resistant gloves. Safety glasses or goggles.

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## SECTION 9: Physical and Chemical Properties

### 9.1. Basic Physical and Chemical Properties

**Appearance:** Green liquid

**Physical State:** Liquid

**Odor:** Data not available.

**Odor Threshold:** Data not available.

**pH:** 3.90 - 4.10

**Melting/Freezing Point:** Data not available.

**Initial Boiling Point/Range:** Approximately 105°C - Approximately 105°C

**Flash Point:** Data not available.

**Evaporation Rate:** Data not available.

**Flammability:** Data not available.

**Flammability/Explosive Limits:** Data not available.

**Vapor Pressure:** Data not available.

**Vapor Density:** Data not available.

**Relative Density:** 1.08

**Solubility:** Miscible

**Partition Coefficient:** Data not available.

**Auto-Ignition Temperature:** Data not available.

**Decomposition Temperature:** Data not available.

**Viscosity:** Data not available.

**Explosive Properties:** Data not available.

**Oxidizing Properties:** Data not available.

## SECTION 10: Stability and Reactivity

### 10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

### 10.2. Possibility of Hazardous Reactions

Data not available.

### 10.3. Conditions to Avoid and Incompatible Materials

Oxidizers (such as perchlorates, peroxides, permanganates, chlorates, and nitrates), hydrogen azide, selenium, tellurium, zinc.

### 10.4. Hazardous Decomposition Products

Will not occur.

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## SECTION 11: Toxicological Information

### 11.1. Information on Toxicological Effects

**Acute Toxicity - Oral Exposure:**

Not applicable.

**Acute Toxicity - Dermal Exposure:**

Not applicable.

**Acute Toxicity - Inhalation Exposure:**

Not applicable.

**Acute Toxicity - Other Information:**

LD50, Oral, Rat: 665 mg/kg (Cadmium Chloride), investigated as a tumorigen, mutagen, reproductive effector.

**Skin Corrosion and Irritation:**

Not applicable.

**Serious Eye Damage and Irritation:**

Not applicable.

**Respiratory Sensitization:**

Not applicable.

**Skin Sensitization:**

Not applicable.

**Germ Cell Mutagenicity:**

Not applicable.

**Carcinogenicity:**

Not applicable.

**Reproductive Toxicity:**

Not applicable.

**Specific Target Organ Toxicity from Single Exposure:**

Not applicable.

**Specific Target Organ Toxicity from Repeated Exposure:**

Not applicable.

**Aspiration Hazard:**

Not applicable.

**Additional Toxicology Information:**

Data not available.

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## SECTION 12: Ecological Information

### 12.1. Ecotoxicity

Toxic to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations.

Toxic to aquatic life with long lasting effects. Avoid release to the environment. Collect spillage. Dispose of contents in accordance with local, state, federal and international regulations.

### 12.2. Persistence and Degradability

Data not available.

### 12.3. Bioaccumulative Potential

Data not available.

### 12.4. Mobility in Soil

Data not available.

### 12.5. Other Adverse Ecological Effects

Data not available.

## SECTION 13: Disposal Considerations

### 13.1. Waste Treatment Methods

Data not available.

## SECTION 14: Transportation Information

### 14.1. Transportation by Land-Department of Transportation (DOT, United States of America)

**Sizes:** 4 L

**UN Number:** UN3287

**Proper Shipping Name:** Toxic Liquid, Inorganic, n.o.s. (Cadmium Chloride)

**Hazard Class:** 6.1

**Packing Group:** III

**Hazard Label(s):**





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### 14.2. Transportation by Air - International Air Transport Association (IATA)

**Sizes:** 4 L

**UN Number:** UN3287

**Proper Shipping Name:** Toxic Liquid, Inorganic, n.o.s. (Cadmium Chloride)

**Hazard Class:** 6.1

**Packing Group:** III

**Hazard Label(s):**



### 14.3 Transportation of Dangerous Goods (TDG, Canada)

**Sizes:** 4 L

**UN Number:** UN3287

**Proper Shipping Name:** TOXIC LIQUID, INORGANIC, N.O.S. (cadmium chloride)

**Hazard Class:** 6.1

**Packing Group:** III

**Hazard Label(s):**



## SECTION 15: Regulatory Information

### 15.1. Occupational Safety and Health Administration (OSHA) Hazards

Cadmium Chloride Hemi-pentahydrate (CAS # 7790-78-5): "5 µg/m<sup>3</sup> TWA (See 29 CFR 1910.1027, as Cd); 2.5 µg/m<sup>3</sup> Action Level (as Cd)" As Cadmium compounds [RR-00559-4]

Cadmium Chloride Hemi-pentahydrate (CAS # 7790-78-5): 5 µg/m<sup>3</sup> TWA (See 29 CFR 1910.1027, as Cd); 2.5 µg/m<sup>3</sup> Action Level (as Cd)

### 15.2. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Not listed.

### 15.3. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Cadmium Chloride Hemi-pentahydrate (CAS # 7790-78-5): 10 lb final RQ; 4.54 kg final RQ

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### 15.4. Superfund Amendments and Reauthorization Act (SARA) 313 Toxic Release Inventory (TRI)

Cadmium Chloride Hemi-pentahydrate (CAS # 7790-78-5): "0.1 % de minimis concentration (includes any unique chemical substance that contains Cadmium as part of that chemical's infrastructure, listed under Chemical Category N078)" As Cadmium compounds [RR-00559-4]

Cadmium Chloride Hemi-pentahydrate (CAS # 7790-78-5): 0.1 % de minimis concentration (includes any unique chemical substance that contains Cadmium as part of that chemical's infrastructure, listed under Chemical Category N078)

### 15.5. Massachusetts Right-to-Know Substance List

Cadmium Chloride Hemi-pentahydrate (CAS # 7790-78-5): Carcinogen; Extraordinarily hazardous

### 15.6. Pennsylvania Right-to-Know Hazardous Substances

Water (CAS # 7732-18-5): "Present" As Ethyl alcohol and water [RR-00802-6]

Water (CAS # 7732-18-5): Present

Cadmium Chloride Hemi-pentahydrate (CAS # 7790-78-5): "Environmental hazard" As Cadmium compounds [RR-00559-4]

Cadmium Chloride Hemi-pentahydrate (CAS # 7790-78-5): "Present" As Cadmium compounds [RR-00559-4]

Cadmium Chloride Hemi-pentahydrate (CAS # 7790-78-5): Environmental hazard

Cadmium Chloride Hemi-pentahydrate (CAS # 7790-78-5): Environmental hazard; Special hazardous substance

Cadmium Chloride Hemi-pentahydrate (CAS # 7790-78-5): Present

### 15.7. New Jersey Worker and Community Right-to-Know Components

Cadmium Chloride Hemi-pentahydrate (CAS # 7790-78-5): "carcinogen" As Cadmium compounds [RR-00559-4]

Cadmium Chloride Hemi-pentahydrate (CAS # 7790-78-5): "SN 2199 500 lb TPQ (Category Code N078. Includes any unique chemical substance that contains the named metal as part of that chemical structure)" As Cadmium compounds [RR-00559-4]

Cadmium Chloride Hemi-pentahydrate (CAS # 7790-78-5): "sn 2199" As Cadmium compounds [RR-00559-4]

Cadmium Chloride Hemi-pentahydrate (CAS # 7790-78-5): carcinogen

Cadmium Chloride Hemi-pentahydrate (CAS # 7790-78-5): carcinogen; mutagen; teratogen

Cadmium Chloride Hemi-pentahydrate (CAS # 7790-78-5): sn 0308

Cadmium Chloride Hemi-pentahydrate (CAS # 7790-78-5): sn 2199

Cadmium Chloride Hemi-pentahydrate (CAS # 7790-78-5): SN 2199 500 lb TPQ (Category Code N078. Includes any unique chemical substance that contains the named metal as part of that chemical structure)

### 15.8. California Proposition 65

Cadmium Chloride Hemi-pentahydrate (CAS # 7790-78-5): "carcinogen, 10/1/1987" As Cadmium compounds [RR-00559-4]

Cadmium Chloride Hemi-pentahydrate (CAS # 7790-78-5): carcinogen, 10/1/1987

### 15.9. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Bromocresol Green, Sodium Salt (CAS # 62625-32-5): Present (DSL)

Water (CAS # 7732-18-5): Present (DSL)

Cadmium Chloride Hemi-pentahydrate (CAS # 7790-78-5): Present (DSL)

### 15.10. United States of America Toxic Substances Control Act (TSCA) List

**All components of this solution are listed as active on the TSCA Inventory or are mixtures (hydrates) of active items listed on the TSCA Inventory.**

Bromocresol Green, Sodium Salt (CAS # 62625-32-5): Present (ACTIVE)

Water (CAS # 7732-18-5): Present (ACTIVE)

Cadmium Chloride Hemi-pentahydrate (CAS # 7790-78-5): Present (ACTIVE)

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### 15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Bromocresol Green, Sodium Salt (CAS # 62625-32-5): 263-657-4

Water (CAS # 7732-18-5): 231-791-2

Cadmium Chloride Hemi-pentahydrate (CAS # 7790-78-5): 233-296-7

## SECTION 16: Other Information

### 16.1. Full Text of Hazard Statements and Precautionary Statements

Toxic to aquatic life with long lasting effects.

Avoid release to the environment.

Collect spillage.

Dispose of contents in accordance with local, state, federal and international regulations.

### 16.2. Miscellaneous Hazard Classes

**Canadian Carcinogenicity Hazard Class:** Not Applicable.

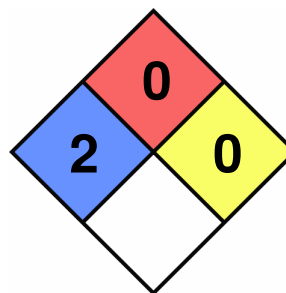
**Physical Hazards Not Otherwise Classified (PHNOC):** Not Applicable.

**Health Hazards Not Otherwise Classified (HHNOC):** Not Applicable.

**Biohazardous Infectious Materials Hazard Class:** Not Applicable.

### 16.3. National Fire Protection Association (NFPA) Rating

<b>Health:</b>	2
<b>Flammability:</b>	0
<b>Reactivity:</b>	0
<b>Special Hazard:</b>	



### 16.4. Document Revision

**Last Revision Date:** 2023-09-11

## DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.