



## Safety Data Sheet

### SECTION 1: Identification

#### 1.1. Product Identifier

**Trade Name or Designation:** Cadmium Standard, 0.1 Percent Cd  
EP Standard Solution 5000700

**Product Number:** R1702000

**Other Identifying Product Numbers:** R1702000-500A

#### 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 hr)

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

### SECTION 2: Hazard(s) Identification

#### 2.1. Classification of the Substance or Mixture (in accordance with OSHA HCS 29 CFR 1910.1200)

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

Hazard Class	Category	Hazard Statement	Precautionary Statements
Respiratory Sensitizer	Category 1	H334	P261, P285, P304+P341, P342+P311, P501
Germ Cell Mutagenicity	Category 1	H340	P201, P202, P280, P308+P313, P405, P501
Carcinogenicity	Category 1	H350	P201, P202, P280, P308+P313, P405, P501
Reproductive Toxicity	Category 1	H360	P201, P202, P280, P308+P313, P405, P501
Hazardous to the Aquatic Environment (Acute)	Category 3	H402	P273, P501

#### 2.2. GHS Label Elements

**Pictograms:**





## Safety Data Sheet

Signal Word: **Danger**

### Hazard Statements:

Hazard Number	Hazard Statement
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H340	May cause genetic defects.
H350	May cause cancer.
H360	May damage fertility or the unborn child.
H402	Harmful to aquatic life.

### Precautionary Statements:

Precautionary Number	Precautionary Statement
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust, fumes or mist.
P273	Avoid release to the environment.
P280	Wear protective gloves and eye protection.
P285	In case of inadequate ventilation wear respiratory protection.
P304+P341	IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
P308+P313	IF exposed or concerned: Get medical attention.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER or physician.
P405	Store locked up.
P501	Dispose of contents in accordance with local, state, federal and international regulations.

### 2.3. WHMIS Classification

WHMIS classification is not included based on the recommended option (Option 4) found in the Canada Gazette Part II, Vol. 149, No.3, page 458

### 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	99.40%
Hydrochloric Acid	HCl	36.46 g/mol	7647-01-0	0.50%
Cadmium	Cd	112.41 g/mol	7440-43-9	0.10%



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### SECTION 4: First-Aid Measures

#### 4.1. General First Aid Information

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

**Inhalation:** IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

**Skin Contact:** May cause slight irritation.

**Ingestion:** Dilute with water or milk. Do not induce vomiting. Call a physician if necessary.

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

These items are mildly corrosive and should be handled with care. Contains a known carcinogen. Wash areas of contact with water. EYE CONTACT: May cause irritation, redness, pain, and tearing. SKIN CONTACT: May cause slight irritation.

#### 4.3. Medical Attention or Special Treatment Needed

Not expected to require special treatment.

### SECTION 5: Fire-Fighting Measures

#### 5.1. Extinguishing Media

Use any means suitable for extinguishing surrounding fire (water or water spray). Neutralize with soda ash or slaked lime.

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

Not considered to be a fire or explosion hazard. May react with metals to release flammable Hydrogen gas.

#### 5.3. Special Protective Equipment for Firefighters

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

### SECTION 6: Accidental Release Measures

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

Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

#### 6.2. Cleanup and Containment Methods and Materials

Do not flush to sewer. Absorb with suitable material. Containerize for disposal with a hazardous waste disposal facility. Dispose of in accordance with local regulations.

### SECTION 7: Handling and Storage

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

Store locked up. 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 (7440-43-9)	TWA	USA	0.1 mg/m <sup>3</sup> TWA (fume, applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect) 0.2 mg/m <sup>3</sup> TWA (dust, applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect) 5 µg/m <sup>3</sup> TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Cadmium (7440-43-9)	TLV-TWA	USA	0.01 mg/m <sup>3</sup> TWA 0.002 mg/m <sup>3</sup> TWA (respirable fraction)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Cadmium (7440-43-9)	TLV-TWA	USA	0.01 mg/m <sup>3</sup> TWA (as Cd) 0.002 mg/m <sup>3</sup> TWA (respirable fraction, as Cd)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Cadmium (7440-43-9)	PEL-Ceiling	USA	0.3 mg/m <sup>3</sup> Ceiling (applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect, fume) 0.6 mg/m <sup>3</sup> Ceiling (applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect, dust)	U.S. - OSHA - Final PELs - Ceiling Limits
Cadmium (7440-43-9)	PEL	USA	5 µg/m <sup>3</sup> TWA (Do not eat, drink or chew tobacco or gum or apply cosmetics in regulated areas. Carcinogen - dust can cause lung and kidney disease. See 29 CFR 1910.1027) 2.5 µg/m <sup>3</sup> Action Level	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Cadmium (7440-43-9)	PEL	USA	5 µg/m <sup>3</sup> TWA (Do not eat, drink or chew tobacco or gum or apply cosmetics in regulated areas. Carcinogen - dust can cause lung and kidney disease. See 29 CFR 1910.1027, as Cd) 2.5 µg/m <sup>3</sup> Action Level (as Cd)	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Hydrochloric Acid (7647-01-0)	TLV-Ceiling	USA	2 ppm Ceiling	ACGIH - Threshold Limit Values - Ceilings (TLV-C)



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Hydrochloric Acid (7647-01-0)	PEL-Ceiling	USA	5 ppm Ceiling 7 mg/m <sup>3</sup> Ceiling	U.S. - OSHA - Final PELs - Ceiling Limits
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### 8.2. Exposure Controls

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

**Respiratory Protection:** In case of inadequate ventilation wear respiratory protection. Normal room ventilation is adequate.

**Skin Protection:** Wear protective gloves and eye protection. Chemical resistant gloves.

**Eye Protection:** Wear protective gloves and eye protection. Safety glasses or goggles.

### 8.3. Personal Protective Equipment

Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection. Normal room ventilation is adequate. Chemical resistant gloves. Safety glasses or goggles.

## SECTION 9: Physical and Chemical Properties

### 9.1. Basic Physical and Chemical Properties

**Appearance:** Colorless liquid

**Physical State:** Liquid

**Odor:** Data not available.

**Odor Threshold:** Data not available.

**pH:** <1

**Melting/Freezing Point:** 0.0°C

**Initial Boiling Point /Range:** 100°C - 100°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:** 1.01

**Solubility:** Miscible

**Partition Coefficient (n-Octanol/Water):** 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.



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### 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

Most metals, Alkalies, active metals, Cyanides, Sulfides, Sulfites, Metal Oxides, Formaldehyde.

#### 10.4. Hazardous Decomposition Products

Will not occur.

### 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, Rabbit (Hydrochloric Acid) 900 mg/kg, (Cadmium) 2330 mg/kg, details of toxic effects not reported other than lethal dose value. LCLo, inhalation, human: 3000 ppm/5 minutes: No toxic effects noted.

##### Skin Corrosion and Irritation:

Not applicable.

##### Serious Eye Damage and Irritation:

Not applicable.

##### Respiratory Sensitization:

May cause allergy or asthma symptoms or breathing difficulties if inhaled. Avoid breathing dust, fumes or mist. In case of inadequate ventilation wear respiratory protection. IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or physician. Dispose of contents in accordance with local, state, federal and international regulations.

##### Skin Sensitization:

Not applicable.



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**Germ Cell Mutagenicity:**

May cause genetic defects. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

**Carcinogenicity:**

May cause cancer. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

**Reproductive Toxicity:**

May damage fertility or the unborn child. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

**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.

## SECTION 12: Ecological Information

**12.1. Ecotoxicity**

Harmful to aquatic life. Avoid release to the environment. 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.



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### SECTION 14: Transportation Information

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

Not regulated according to DOT Regulations.

Not regulated according to IATA Regulations.

### SECTION 15: Regulatory Information

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

Cadmium (CAS # 7440-43-9): 5 µg/m<sup>3</sup> TWA (See 29 CFR 1910.1027); 2.5 µg/m<sup>3</sup> Action Level

Cadmium (CAS # 7440-43-9): 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

Hydrochloric Acid (CAS # 7647-01-0): 500 lb TPQ (gas only)

Hydrochloric Acid (CAS # 7647-01-0): 5000 lb EPCRA RQ (gas only)





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

Cadmium (CAS # 7440-43-9): 0.1 curie final RQ; 0.0037 TBq final RQ

Cadmium (CAS # 7440-43-9): 1 curie final RQ; 0.037 TBq final RQ

Cadmium (CAS # 7440-43-9): 10 curie final RQ; 0.37 TBq final RQ

Cadmium (CAS # 7440-43-9): 10 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is  $>100\ \mu\text{m}$ ); 4.54 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is  $>100\ \mu\text{m}$ )

Cadmium (CAS # 7440-43-9): 10 lb final RQ; 4.54 kg final RQ

Cadmium (CAS # 7440-43-9): 100 curie final RQ; 3.7 TBq final RQ

Cadmium (CAS # 7440-43-9): 1000 curie final RQ; 37 TBq final RQ

Hydrochloric Acid (CAS # 7647-01-0): 5000 lb final RQ; 2270 kg final RQ

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

Cadmium (CAS # 7440-43-9): 0.1 % de minimis concentration

Cadmium (CAS # 7440-43-9): 0.1 % de minimis concentration (listed under Chemical Category N078)

Hydrochloric Acid (CAS # 7647-01-0): 1.0 % de minimis concentration (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)

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

Cadmium (CAS # 7440-43-9): Carcinogen; Extraordinarily hazardous

Hydrochloric Acid (CAS # 7647-01-0): Extraordinarily hazardous

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

Cadmium (CAS # 7440-43-9): Environmental hazard

Cadmium (CAS # 7440-43-9): Environmental hazard (dust; fume; metal; powder); Special hazardous substance (metal; powder)

Cadmium (CAS # 7440-43-9): Present

Cadmium (CAS # 7440-43-9): Present (dust; fume; metal; powder)

Cadmium (CAS # 7440-43-9): Present (metal; powder)

Hydrochloric Acid (CAS # 7647-01-0): Environmental hazard

Hydrochloric Acid (CAS # 7647-01-0): Present

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

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

Cadmium (CAS # 7440-43-9): carcinogen

Cadmium (CAS # 7440-43-9): carcinogen; flammable - third degree; teratogen

Cadmium (CAS # 7440-43-9): sn 0305

Cadmium (CAS # 7440-43-9): SN 0305 500 lb TPQ

Cadmium (CAS # 7440-43-9): sn 2199

Cadmium (CAS # 7440-43-9): SN 2199 500 lb TPQ (Category Code N078)

Hydrochloric Acid (CAS # 7647-01-0): corrosive

Hydrochloric Acid (CAS # 7647-01-0): sn 1012

Hydrochloric Acid (CAS # 7647-01-0): SN 1012 500 lb TPQ ( $\geq 37\%$  concentration); SN 2909 500 lb TPQ (Hydrogen chloride gas only)



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### 15.8. California Proposition 65

Cadmium (CAS # 7440-43-9): 0.05 µg/day NSRL (inhalation)  
Cadmium (CAS # 7440-43-9): carcinogen, 10/1/1987  
Cadmium (CAS # 7440-43-9): developmental toxicity, 5/1/1997  
Cadmium (CAS # 7440-43-9): male reproductive toxicity, 5/1/97

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

Cadmium (CAS # 7440-43-9): Present (DSL)  
Hydrochloric Acid (CAS # 7647-01-0): Present (DSL)  
Water (CAS # 7732-18-5): Present (DSL)

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

Cadmium (CAS # 7440-43-9): Present  
Hydrochloric Acid (CAS # 7647-01-0): Present [T]  
Water (CAS # 7732-18-5): Present

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

Not listed.

## SECTION 16: Other Information

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

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause genetic defects. May cause cancer. May damage fertility or the unborn child. Harmful to aquatic life.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust, fumes or mist. Avoid release to the environment. Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. IF exposed or concerned: Get medical attention. If experiencing respiratory symptoms: Call a POISON CENTER or physician.

Store locked up.

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.

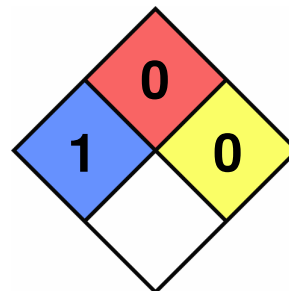
**Health Hazards Not Otherwise Classified (HHNOC):** Not Applicable.  
Not Applicable.



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

Health: 1  
Flammability: 0  
Reactivity: 0  
Special Hazard:





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### 16.4. Document Revision

**Last Revision Date:** 5/1/2015

#### 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.