

## Safety Data Sheet

### SECTION 1: Identification

#### 1.1. Product Identifier

**Trade Name or Designation:** Total Copper Standard, 30 ppm

**Product Number:** R2287030

**Other Identifying Product Numbers:** R2287030-1N

#### 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  |
|--|-------------|------------------|---|
| Skin Corrosion / Irritation  | Category 1A | H314             | P260, P264, P280, P301+P330+P331, P303+P361+P353, P363, P304+P340, P310, P321, P305+P351+P338, P405, P501 |
| Eye Damage / Irritation  | Category 1  | H318             | P280, P305+P351+P338, P310  |
| Respiratory Sensitizer   | Category 1  | H334             | P261, P285, P304+P341, P342+P311, P501  |
| Specific Target Organs/Systemic Toxicity Following Single Exposure   | Category 1  | H370             | P260, P264, P270, P307+P311, P321, P405, P501   |
| Specific Target Organs/Systemic Toxicity Following Repeated Exposure | Category 1  | H372             | P260, P264, P270, P314, P501  |
| Corrosive to Metals  | Category 1  | H290             | P234, P390, P406  |
| Hazardous to the Aquatic Environment (Acute)                         | Category 3  | H402             | P273, P501  |

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### 2.2. GHS Label Elements

Pictograms:



Signal Word: **Danger**

Hazard Statements:

| Hazard Number | Hazard Statement   |
|---------------|--|
| H290          | May be corrosive to metals.  |
| H314          | Causes severe skin burns and eye damage.                                   |
| H318          | Causes serious eye damage.   |
| H334          | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H370          | Causes damage to organs.   |
| H372          | Causes damage to organs through prolonged or repeated exposure.            |
| H402          | Harmful to aquatic life.   |



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### Precautionary Statements:

| Precautionary Number | Precautionary Statement   |
|----------------------|---|
| P234                 | Keep only in original container.  |
| P260                 | Do not breathe dust, fumes or mist.   |
| P261                 | Avoid breathing dust, fumes or mist.  |
| P264                 | Wash arms, hands and face thoroughly after handling.  |
| P270                 | Do not eat, drink or smoke when using this product.   |
| P273                 | Avoid release to the environment.   |
| P280                 | Wear protective gloves and eye protection.  |
| P285                 | In case of inadequate ventilation wear respiratory protection.  |
| P301+P330+P331       | IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  |
| P303+P361+P353       | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.                                      |
| P304+P341            | IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.                             |
| P305+P351+P338       | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to d<br>Continue rinsing. |
| P307+P311            | IF exposed: Call a POISON CENTER or physician.  |
| P310                 | Immediately call a POISON CENTER or physician.  |
| P314                 | Get medical attention if you feel unwell.   |
| P321                 | Specific treatment (Wash areas of contact with water immediately).  |
| P342+P311            | If experiencing respiratory symptoms: Call a POISON CENTER or physician.  |
| P363                 | Wash contaminated clothing before reuse.  |
| P390                 | Absorb spillage to prevent material damage.   |
| P405                 | Store locked up.  |
| P406                 | Store in corrosive resistant container with a resistant inner liner.  |
| 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.



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### 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  | 98.28%  |
| Hydrochloric Acid | HCl              | 36.46 g/mol      | 7647-01-0  | 1.72%   |
| Copper            | Cu               | 63.54 g/mol      | 7440-50-8  | 0.00%   |

### SECTION 4: First-Aid Measures

#### 4.1. General First Aid Information

**Eye Contact:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. 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:** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. May cause irritation, redness, and pain.

**Ingestion:** IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Dilute with water or milk. Do not induce vomiting. Call a physician if necessary.

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

WARNING! Corrosive. Avoid ingestion, and contact with skin, eyes or clothing. If ingested, do not induce vomiting. Dilute with water and 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.

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

Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately).

### 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. 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.



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### 6.2. Cleanup and Containment Methods and Materials

Cover the spill with Sodium Carbonate or a soda ash-slaked lime mixture (50:50). Mix and add water to form slurry. Decant the liquid to the drain with excess water. Treat the solid residue as normal refuse. Wash site with soda ash solution. Always dispose of in accordance with local regulations.

## SECTION 7: Handling and Storage

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

Store in corrosive resistant container with a resistant inner liner. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage.

## SECTION 8: Exposure Controls / Personal Protection

### 8.1. Control Parameters

| Chemical Name                 | Limit Type  | Country | Exposure Limit  | Information Source  |
|-------------------------------|-------------|---------|---|---|
| Copper (7440-50-8)            | TWA         | USA     | 0.1 mg/m <sup>3</sup> TWA (fume)<br>1 mg/m <sup>3</sup> TWA (dust and mist) | U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)          |
| Copper (7440-50-8)            | TLV-TWA     | USA     | 1 mg/m <sup>3</sup> TWA (dust and mist, as Cu)                              | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA) |
| Copper (7440-50-8)            | TLV-TWA     | USA     | 0.2 mg/m <sup>3</sup> TWA (fume)  | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA) |
| Hydrochloric Acid (7647-01-0) | TLV-Ceiling | USA     | 2 ppm Ceiling   | ACGIH - Threshold Limit Values - Ceilings (TLV-C)                 |
| Hydrochloric Acid (7647-01-0) | PEL-Ceiling | USA     | 5 ppm Ceiling<br>7 mg/m <sup>3</sup> Ceiling                                | U.S. - OSHA - Final PELs - Ceiling Limits                         |

### 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.



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### SECTION 9: Physical and Chemical Properties

#### 9.1. Basic Physical and Chemical Properties

**Appearance:** Colorless to light blue liquid

**Physical State:** Liquid

**Odor:** Data not available.

**Odor Threshold:** Data not available.

**pH:** Acidic

**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:** 1.02

**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.

### 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

Keep only in original container. Most metals, Alkalis, active metals, Cyanides, Sulfides, Sulfites, Metal Oxides, Formaldehyde.

#### 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, Rabbit (Hydrochloric Acid) 900 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:**

Causes severe skin burns and eye damage. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

**Serious Eye Damage and Irritation:**

Causes serious eye damage. Wear protective gloves and eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

**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.

**Germ Cell Mutagenicity:**

Not applicable.

**Carcinogenicity:**

Not applicable.

**Reproductive Toxicity:**

Not applicable.



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### Specific Target Organ Toxicity from Single Exposure:

Causes damage to organs. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF exposed: Call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

### Specific Target Organ Toxicity from Repeated Exposure:

Causes damage to organs through prolonged or repeated exposure. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Get medical attention if you feel unwell. Dispose of contents in accordance with local, state, federal and international regulations.

### 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.

## Safety Data Sheet

### SECTION 14: Transportation Information

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

**Sizes:** 1 L

**UN Number:** UN1789

**Proper Shipping Name:** Hydrochloric Acid Solution

**Hazard Class:** 8

**Packing Group:** III

**Hazard Placard Labels:**



**Sizes:**

**UN Number:**

**Proper Shipping Name:**

**Hazard Class:**

**Packing Group:**

**Hazard Placard Labels:**

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

**Sizes:** 1 L

**UN Number:** UN1789

**Proper Shipping Name:** Hydrochloric Acid Solution

**Hazard Class:** 8

**Packing Group:** III

**Hazard Placard Labels:**



### SECTION 15: Regulatory Information

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

Not listed.



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### 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)

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

Copper (CAS # 7440-50-8): 100 curie final RQ; 3.7 TBq final RQ

Copper (CAS # 7440-50-8): 1000 curie final RQ; 37 TBq final RQ

Copper (CAS # 7440-50-8): 5000 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 µm); 2270 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 µm)

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)

Copper (CAS # 7440-50-8): 1.0 % de minimis concentration

Copper (CAS # 7440-50-8): 1.0 % de minimis concentration (This category does not include CAS numbers 147-14-8, 1328-53-6, or 14302-13-7, or copper phthalocyanine compounds that are substituted with only hydrogen and/or chlorine and/or bromine., listed under Chemical Category N100)

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

Copper (CAS # 7440-50-8): Present

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

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

Copper (CAS # 7440-50-8): Environmental hazard

Copper (CAS # 7440-50-8): Environmental hazard (dust; fume; metal)

Copper (CAS # 7440-50-8): Present

Copper (CAS # 7440-50-8): Present (dust; fume; metal)

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

Copper (CAS # 7440-50-8): sn 0528

Copper (CAS # 7440-50-8): SN 0528 500 lb TPQ

Copper (CAS # 7440-50-8): sn 2215

Copper (CAS # 7440-50-8): SN 2215 500 lb TPQ (except C.I. Pigment Blue 15, C.I. Pigment Green 7, and C.I. Pigment Green 36, Category Code N100)

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 (>=37% concentration); SN 2909 500 lb TPQ (Hydrogen chloride gas only)

### 15.8. California Proposition 65

Not listed.



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

Copper (CAS # 7440-50-8): 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

Copper (CAS # 7440-50-8): 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 be corrosive to metals. Causes severe skin burns and eye damage. Causes serious eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure. Harmful to aquatic life

Keep only in original container. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed: Call a POISON CENTER or physician. Get medical attention if you feel unwell. Specific treatment (Wash areas of contact with water immediately). If experiencing respiratory symptoms: Call a POISON CENTER or physician. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.

Store locked up. Store in corrosive resistant container with a resistant inner liner.

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

### 16.2. Miscellaneous Hazard Classes

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

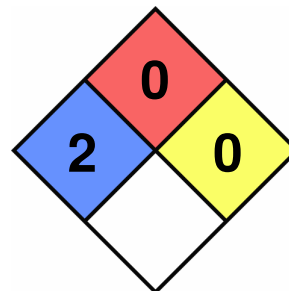
**Physical Hazards Not Otherwise Classified (PHNOC):** Not Applicable.

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

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

Health: 2  
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.