

MSDS

PHENANTHROLINE, < 1% (w/v) Aqueous Solutions

## Material Safety Data Sheet

### Section 1: Chemical Product and Company Identification

<b>Catalog Number:</b> 5520, 5521, 5522, P-130, SP066680, SP066720	
<b>Product Identity:</b> PHENANTHROLINE, < 1% (w/v) Aqueous Solutions	
<b>Manufacturer's Name:</b> RICCA CHEMICAL COMPANY LLC	<b>Emergency Contact(24 hr) -- CHEMTREC®</b> Domestic: 800-424-9300 International: 703-527-3887
<b>CAGE Code:</b> 0V553	
<b>Address:</b> 448 West Fork Dr Arlington, TX 76012	<b>Telephone Number For Information:</b> 817-461-5601
<b>Date Prepared:</b> 6/22/98	<b>Revision: 6</b>  Last Revised: 02/21/2006 Date Printed: 08/31/2006 1:04:27 pm

### Section 2. Composition/Information on Ingredients

Component	CAS Registry #	Concentration	ACGIH TLV	OSHA PEL
1, 10-Phenanthroline Monohydrate	5144-89-8	<1	Not Available Not Available	Not Available Not Available
Hydrochloric Acid	7647-01-0	0.09-0.11	C 5 ppm C 7.5 mg/m3	C 5 ppm C 7 mg/m3
Water, Deionized	7732-18-5	Balance	Not Available Not Available	Not Available Not Available

### Section 3: Hazard Identification

**Emergency Overview:** May be harmful if swallowed. If ingested, dilute with water and call a physician if necessary. Wash areas of contact with water. Does not present any significant health hazards.

**Target Organs:** eyes, skin

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

**Inhalation:** Not likely to be hazardous by inhalation.

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

**Ingestion:** Large doses may cause stomach upset.

**Chronic Effects/Carcinogenicity:** None

**IARC** - Hydrochloric Acid is unclassifiable as to carcinogenicity to humans.

**NTP** - No.

**OSHA** - No.

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**Reproductive Information:** Reproductive effects cited in 'Registry of Toxic Effects of Chemical Substances' for Hydrochloric Acid.

**Teratology (Birth Defect) Information:** Mutation data cited in 'Registry of Toxic Effects of Chemical Substances' for Hydrochloric Acid. Mutation data cited in 'Registry of Toxic Effects of Chemical Substances' for 1, 10-Phenanthroline Monohydrate.

**Section 4: First Aid Measures - In all cases, seek qualified evaluation.**

**Eye Contact:** Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops.

**Inhalation:** Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen.

**Skin Contact:** Wash areas of contact with soap and water for at least 15 minutes. Call a physician if irritation develops.

**Ingestion:** Dilute with water or milk. Call a physician if necessary.

**Section 5: Fire Fighting Measures**

**Flash Point:** Not Available.

**Method Used:** Not Available.

**LFL:** Not Available.

**UFL:** Not Available.

**Extinguishing Media:** Use any means suitable for extinguishing surrounding fire.

**Fire & Explosion Hazards:** Not considered to be a fire or explosion hazard.

**Fire Fighting Instructions:** Use normal procedures/instructions.

**Fire Fighting Equipment:** Use protective clothing and breathing equipment appropriate for the surrounding fire.

**Section 6: Accidental Release Measures**

Absorb with suitable material and treat as normal refuse. Small amounts of the liquid may be flushed to the drain with excess water. Always dispose of in accordance with local regulations.

**Section 7. Handling and Storage**

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

**Safety Storage Code:** General

**Section 8: Exposure Control/Personal Protection**

**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.

**Section 9: Physical and Chemical Properties**

**Appearance:** Clear, colorless to very light green liquid

**Odor:** Odorless

**Solubility in Water:** Infinite

**Specific Gravity:** Approximately 1

**pH:** Not Available.

**Boiling Point(°C):** Approximately 100

**Melting Point(°C):** Approximately 0

**Vapor Pressure:** Not Applicable.

**Section 10: Stability and Reactivity**

**Chemical Stability:** Stable under normal conditions of use and storage.

**Incompatibility:** Strong oxidizing agents.

**Hazardous Decomposition Products:** May emit fumes of Carbon and Nitrogen Oxides when heated to decomposition.

**Hazardous Polymerization:** Will not occur.

**Section 11. Toxicological Information**

LD50, Oral, Rabbit: (Hydrochloric Acid) 900 mg/kg, details of toxic effects not reported other than lethal dose value; no information found on Phenanthroline Monohydrate.

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**Section 12. Ecological Information****Ecotoxicological Information:** No information found**Chemical Fate Information:** No information found**Section 13. Disposal Considerations**

Dilute with water, neutralize with weak sodium hydroxide solution, then flush to sewer if local regulations allow. If not allowed, save for recovery or recycling in an approved waste disposal facility. Always dispose of in accordance with local, state and federal regulations.

**Section 14. Transport Information**

Part Numbers:

This product is not regulated.

**Section 15. Regulatory Information (Not meant to be all inclusive - selected regulation represented)**

**OSHA Status:**The above items either do not contain any specifically hazardous material or the potentially hazardous material is present in such low concentration that the items do not present any immediate threat to health and safety. These items do not meet the OSHA Hazard Communication Standard (29 CFR 1910.1200) definition of a hazardous material.

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

Sara Title III:

**Section 302 Extremely Hazardous Substances:**Not Applicable.**Section 311/312 Hazardous Categories:**No**Section 313 Toxic Chemicals:**Not Applicable.**California:** None Reported.**Pennsylvania:** Hydrochloric Acid is listed as an Environmental Hazard on the state's Hazardous Substances List.**RCRA Status:** Not Applicable.**CERCLA Reportable Quantity:** Hydrochloric Acid - 5,000 pounds.**WHMIS:** Not Applicable.**Section 16. Other Information**

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## NFPA Ratings:

Health: 1                      Flammability: 0                      Reactivity: 0                      Special Notice Key:None

## HMIS Ratings:

Health: 1                      Flammability: 0                      Reactivity: 0                      Protective Equipment:B (Protective Eyewear, Gloves)

Rev 1, 6-24-98: (Section 11) added LD50 information for Hydrochloric Acid.

Rev 2, 10-19-98: Removed periods from NFPA and HMIS, added ® to HMIS.

Rev 3, 8-9-99: (Section 16) revised ratings to 1-0-0.

Rev 4, 8-28-2000: Reformatted from WordPerfect® to Microsoft Word®, combined msds00007 and msds00317, deleted msds00317; (Section 1) Revised emergency telephone number to CHEMTREC® 800-424-9300, added catalog numbers 5521 and 5522, revised title to &lt; 1%; (Section 2) revised exposure limits from mg/m3 to ppm; (Section 3) added mutation data citing for Phenanthroline and Hydrochloric Acid, added reproductive effects cited for Hydrochloric Acid; (Section 4) removed note to physician; (Section 7) added storage code.

Rev 5, 10-09-2001: Reformatted to electronic data format.

Rev 6, 02-21-2006: (Section 1) added Red Bird catalog number P-130.

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.