

## Safety Data Sheet


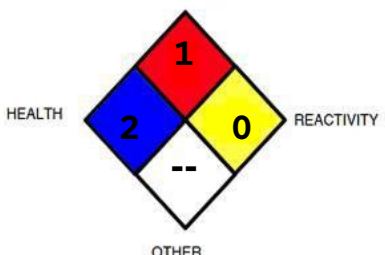
### Section 1: Product & Company Identification

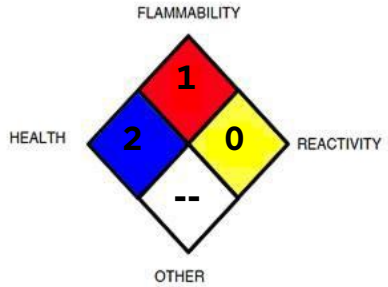
<b>Product Name:</b>	1,10-Phenanthroline Monohydrate
<b>Product #:</b>	P-1520
<b>Synonyms:</b>	o-Phenanthroline monohydrate
<b>Supplier:</b>	AG Scientific Holdings, LLC 9950 Scripps Lake Drive, Suite 104 San Diego CA 92131 Tele# + 858-452-9925
<b>Emergency Tele#:</b>	ChemTel, Tele# in USA 1-800-255-3924, International 1-813-248-0585

### Section 2: Composition / Information on Ingredients

Component	CAS#	EC #	% Composition
1,10-Phenanthroline Monohydrate	5144-89-8		

### Section 3: Hazards Identification

<b>Symbols</b>	
<b>HMIS Classification</b>	<p style="text-align: center;">FLAMMABILITY</p>  <p style="text-align: center;">OTHER</p>

<b>NFPA Classification</b>	
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## Section 4: First Aid Measures

<b>General Overview:</b>	Immediate medical attention is required.
<b>Inhalation:</b>	Immediate medical attention is required. Remove to fresh air. If not breathing, give artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.
<b>Skin:</b>	Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
<b>Eyes:</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Call a physician immediately.
<b>Ingestion:</b>	Do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Drink plenty of water.
	See section 11 for more detailed information on health effects & symptoms.

## SECTION 5: Fire Fighting Measures

<b>Flammability of the product:</b>	No data available
<b>Extinguishing Media:</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Hazardous thermal (de)composition products:</b>	Carbon oxides, Nitrogen oxides (NO <sub>x</sub> )
<b>Special Fire Fighting Procedures:</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
<b>Flash Point:</b>	No data available

## Section 6: Accidental Release Measures




<b>Personal Precautions:</b>	Use personal protective equipment as required. Keep people away from and upwind of spill/leak.
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<b>Environmental Precautions:</b>	Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See Section 12 for additional Ecological Information.
<b>Methods for Clean-up:</b>	Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal. Use personal protective equipment as required. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Avoid creating dust.

## SECTION 7: Handling & Storage

<b>Storage:</b>	Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Protect from moisture. Store at room temperature.
<b>Handling:</b>	Avoid contact with skin, eyes, or clothing. Use personal protective equipment as required. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink, or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice. Corrosive hazard. Wear protective gloves/clothing and eye/face protection.

## SECTION 8: Exposure controls / Personal Protection

<b>Respiratory Protection:</b>	 <p>If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.</p>
<b>Skin and Body:</b>	  <p>Wear protective gloves and protective clothing.</p>

<b>Eyes:</b>	 <p>Tight sealing safety goggles</p>
<b>Ventilation/Engineering Measures:</b>	Showers, Eyewash stations, Ventilation systems
<b>Hygiene:</b>	Handle in accordance with good industrial hygiene and safety practice.
<b>Other:</b>	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region-specific regulatory bodies.

## SECTION 9: Physical and Chemical Properties

<b>Appearance &amp; Odor:</b>	White solid
<b>Formula</b>	$C_{12}H_8N_2 \cdot H_2O$
<b>Molecular Wt.</b>	198.22
<b>Melting Pt.</b>	100°C
<b>Boiling Pt.</b>	No data available
<b>Density:</b>	No data available
<b>Vapor Pressure:</b>	No data available
<b>Evaporation Rate:</b>	No data available
<b>Vapor Density:</b>	6.9
<b>Solubility:</b>	DMSO, ethanol, water
<b>Flash Point:</b>	No data available
<b>Autoignition Temp:</b>	No data available

## SECTION 10: Stability and Reactivity

<b>Stability:</b>	Stable under recommended storage conditions.
<b>Hazardous decomposition products:</b>	Carbon oxides, Nitrogen oxides (NO <sub>x</sub> )
<b>Materials to Avoid:</b>	Strong oxidizing agents
<b>Conditions to avoid:</b>	Exposure to air or moisture over prolonged periods.

## SECTION 11: Toxicological Information

<b>RTECS#:</b>	N/A
<b>ACUTE Toxicity:</b>	N/A
<b>CHRONIC Toxicity:</b>	N/A
<b>Chronic Exposure:</b> <b>Carcinogen:</b> <b>Mutagen:</b> <b>Teratogen:</b> <b>Reproductive:</b>	<p>IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.</p> <p>AGGIH: No component of this product present at levels greater than or equal to 0.1% is identified as probable, potential human carcinogen by ACGIH.</p> <p>NTP: No component of this product present at levels greater than or equal to 0.1% is identified as known or anticipated human carcinogen by NTP.</p> <p>OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as known or potential human carcinogen by OSHA.</p> <p>EPA: No classification on carcinogenic data is available from EPA</p>

## SECTION 12: Ecological Information

<b>Ecotoxicity:</b>	Very toxic to aquatic life.
<b>Mobility:</b>	No data available
<b>Persistence and degradability:</b>	No data available
<b>Bioaccumulative potential:</b>	No data available
<b>Other adverse effects:</b>	No data available
<b>Corrosivity Characteristic:</b>	No data available
<b>General Notes:</b>	To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

## SECTION 13: Disposal Considerations

<b>Residue Waste or Unused product:</b>	Disposal should be in accordance with applicable regional, national, and local laws and regulations.
<b>Contaminated Packaging:</b>	Do not reuse container. Waste codes should be assigned by the user based on the application for which the product was used.

## SECTION 14: Transportation Information

<b>UN ID#:</b>	2811
<b>ADR / RID (LAND):</b>	UN2811

	<p>Hazard Class: 6.1  Packaging Group: III  Proper Shipping Name: Toxic solids, organic, n.o.s.  Description: UN2811, Toxic solids, organic, n.o.s. (o-Phenanthroline monohydrate), 6.1, III</p>
<b>DOT regulations:</b>	<p>UN2811  Hazard Class: 6.1  Packaging Group: III  Proper Shipping Name: Toxic solids, organic, n.o.s.  Description: UN2811, Toxic solids, organic, n.o.s. (o-Phenanthroline monohydrate), 6.1, III  Emergency Response Guide Number 154</p>
<b>IMDG/IMO (SEA):</b>	<p>UN2811  Hazard Class: 6.1  Packaging Group: III  Proper Shipping Name: Toxic solids, organic, n.o.s.  Description: UN2811, Toxic solids, organic, n.o.s. (o-Phenanthroline monohydrate), 6.1, III, Marine pollutant  Special Provisions: 223, 274  EmS-No: F-A, S-A</p>
<b>IATA/DGR (AIR):</b>	<p>UN2811  Hazard Class: 6.1  Packaging Group: III  Proper Shipping Name: Toxic solids, organic, n.o.s.  Description: UN2811, Toxic solids, organic, n.o.s. (o-Phenanthroline monohydrate), 6.1, III  ERG Code: 6L</p>
<b>Special Provisions:</b>	N/A

## SECTION 15: Regulatory Information

<b>Health Phrases:</b>	H301 Toxic if swallowed
<b>Risk Phrases:</b>	P270 Do not eat, drink, or smoke when using this product
<b>Safety Phrases:</b>	<p>P308+P313 IF exposed or concerned: Get medical advice/attention  P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth  P405 Store locked up  P501 Dispose of contents/container to an approved waste disposal plant</p>
<b>EU Regulations:</b>	N/A
<b>US Regulations:</b>	<p>TSCA: Not listed  California Proposition 65: No products were found</p>
<b>U.S. Federal Regulations:</b>	<p>SARA 302/304 emergency planning and notification: No products were found.  SARA 311/312 MSDS distribution-chemical inventory-hazard identification: Acute Health Hazard  SARA 313 toxic chemicals notification and release reporting: No products were found.</p>

	<p>Clean Water Act (CWA) 307: No products were found.          Clean Water Act (CWA) 311: No products were found.          Clean Air Act (CAA) 112 accidental release prevention: No products were found.          Clean Air Act (CAA) 112 regulated flammable substances: No products were found.          Clean Air Act (CAA) 112 regulated toxic substances: No products were found.          OSHA: Acute toxicity - oral (Cat. 3)</p>
<b>WHMIS (Canada):</b>	N/A

## **SECTION 16: Other Information**

**LIABILITY STATEMENT:** *The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. AG Scientific shall not be held liable for any damages resulting from handling or from contact with the above product. AG Scientific products are for research purposes only. Not for human use or consumption.*