



**Material Safety Data Sheet**  
**Phenanthroline, 0.1% - 0.25%APHA**

### Section 1 - Chemical Product and Company Identification

**MSDS Name:**

Phenanthroline, 0.1% - 0.25%APHA

**Catalog Numbers:**

LC18150, LC18160

**Synonyms:**

1,10-phenanthroline, phenanthroline.

**Company Identification:**

LabChem, Inc.  
 200 William Pitt Way  
 Pittsburgh, PA 15238

**Company Phone Number:**

(412) 826-5230

**Emergency Phone Number:**

(800) 424-9300

**CHEMTREC Phone Number:**

(800) 424-9300

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	Percent
7732-18-5	Water	balance
5144-89-8	1.10-Phenanthroline monohydrate	0.1-0.25

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

*Appearance: Colorless**Caution! May cause eye and skin irritation.**Target Organs: none known.***Potential Health Effects****Eye:**

Causes redness, pain, and irritation.

**Skin:**

May cause redness, pain, and irritation.

**Ingestion:**

May cause irritation of the digestive tract.



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**Inhalation:**

Inhalation may cause coughing, respiratory tract irritation, dyspnea, and pulmonary edema.

**Chronic:**

Repeated or prolonged contact may cause irritation, dermatitis, conjunctivitis, and mucous membrane irritation.

## Section 4 - First Aid Measures

**Eyes:**

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids until no evidence of chemical remains. Get medical aid at once.

**Skin:**

Get medical aid. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Remove contaminated clothing and shoes.

**Ingestion:**

Get medical aid at once. Give oxygen if respiration is depressed. Induce vomiting (touch finger to back of throat) keeping head lower than hips (prevent aspiration into lungs).

**Inhalation:**

Give artificial respiration if necessary. Get medical aid. Keep victim warm, at rest. Move victim to fresh air.

**Notes to Physician:**

Treat symptomatically and supportively.

## Section 5 - Fire Fighting Measures

**General Information:**

Negligible fire and explosion hazard when exposed to heat or flame. Move container if possible, avoid breathing vapors or dust.

**Extinguishing Media:**

Use carbon dioxide or dry chemical. For large fires, use water spray, fog or regular foam.

**Autoignition Temperature:**

No information found.

**Flash Point:**

Not applicable.

**NFPA Rating:**

CAS# 7732-18-5: Not published.

CAS# 5144-89-8: Not published.

**Explosion Limits:**

Lower:      Upper:

## Section 6 - Accidental Release Measures

**General Information:**

Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:**

Absorb spills with absorbent (vermiculite, sand, fuller's earth) and place in plastic bags for later disposal. Area may be washed down with water.



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**Section 7 - Handling and Storage**

**Handling:**

Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing.

**Storage:**

Store capped at room temperature. Keep away from water reactive substances.

**Section 8 - Exposure Controls, Personal Protection**

**Engineering Controls:**

Provide local exhaust or general dilution ventilation.

**Exposure Limits**

<b>Chemical Name:</b>	<b>ACGIH</b>	<b>NIOSH</b>	<b>OSHA</b>
Water	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.
1.10-Phenanthroline monohydrate	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.

**OSHA Vacated PELs**

**Personal Protective Equipment**

**Eyes:**

Do not wear contact lenses when working with chemicals. An eye wash fountain should be available in the immediate work area. Wear splash-proof safety goggles.

**Skin:**

Wear appropriate protective gloves to prevent skin exposure.

**Clothing:**

Wear appropriate protective clothing to prevent skin exposure.

**Respirators:**

Not required for normal use. Firefighting-SCBA F:PD,PP. (Respirator Codes: DHEW (NIOSH) Publication No. 78-210)

**Section 9 - Physical and Chemical Properties**

**Physical State:** Clear liquid

**Color:** Colorless

**Odor:** Odorless

**pH:** No information found.

**Vapor Pressure:** 14mm Hg @20°C

**Vapor Density:** > air

**Evaporation Rate:** < ether

**Viscosity:** No information found.

**Boiling Point:** 212°F ( 100.00°C)

**Freezing/Melting Point:** 32°F ( 0.00°C)



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**Decomposition Temperature:** No information found.

**Solubility in water:** Slightly soluble.

**Specific Gravity/Density:** 1.0

**Molecular Formula:** No information found.

**Molecular Weight:** No information found.

## Section 10 - Stability and Reactivity

**Chemical Stability:**

Stable under normal temperatures and pressures.

**Conditions to Avoid:**

Incompatible materials, none reported.

**Incompatibilities with Other Materials**

None reported.

**Hazardous Decomposition Products**

No information found.

**Hazardous Polymerization**

Has not been reported

## Section 11 - Toxicological Information

**RTECS:**

CAS# 7732-18-5: ZC0110000.

CAS# 5144-89-8: SF8437000.

**LD50/LC50:**

CAS# 7732-18-5:

Oral, rat: LD50 = >90 mL/kg.

CAS# 5144-89-8:

No information found.

**Carcinogenicity:**

CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 5144-89-8: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

**Epidemiology:**

1.10-phenanthroline may irritate skin, eyes, mucous membrane.

**Teratogenicity:**

**Reproductive:**

**Mutagenicity:**

**Neurotoxicity:**

## Section 12 - Ecological Information

No information found.



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**Section 13 - Disposal Considerations**

Dispose of in accordance with Federal, State, and local regulations.

**Section 14 - Transport Information**

**US DOT**

**Shipping Name:** Not regulated.

**Hazard Class:**

**UN Number:**

**Packing Group:**

**Section 15 - Regulatory Information**

**US Federal**

**TSCA**

CAS# 7732-18-5 is listed on the TSCA Inventory.

CAS# 5144-89-8 is not on the TSCA Inventory, however, it is anhydrous form on the inventory and so this hydrate is exempt from TSCA Inventory requirements (40 CFR 270.3(u)(2)).

**SARA Reportable Quantities (RQ)**

None of the components are on this list.

**CERCLA/SARA Section 313**

None of the components are on this list.

**OSHA - Highly Hazardous**

None of the components are on this list.

**US State**

**State Right to Know**

**California Regulations**

**European/International Regulations**

**Canadian DSL/NDSL**

CAS# 7732-18-5 is listed on Canada's DSL List.

**Canada Ingredient Disclosure List**

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

CAS# 5144-89-8 is not listed on Canada's Ingredient Disclosure List.

**Section 16 - Other Information**

MSDS Creation Date: November 18, 1997

Revision Date: February 20, 2007



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