



# MSDS

P.O. Box 329 - 802 Washington Avenue Chestertown, MD 21620 - USA

## MATERIAL SAFETY DATA SHEET

TELEPHONE # FOR INFORMATION 410 778-3100

24 HOUR EMERGENCY NUMBER (CHEM-TEL): USA, Canada, Puerto Rico 800-255-3924;

Outside North American Continent 813-248-0585 (call Collect)

### 1. Product Identification

**Product Code:** 6410

**Product Description:** Ferroin Indicator

**Manufactured By:** LaMotte Company

802 Washington Avenue

Chestertown, MD 21620

### 2. Composition/Information On Ingredients

Hazard	CAS#/Name	%	PEL	TLV
Yes	5144-89-8 1, 10 Phenanthroline monohydrate	0.3	N/E	N/E
Yes	7782-63-0 Ferrous Sulfate heptahydrate	0.1	N/E	1 mg/m <sup>3</sup> (sol. iron as Fe)
No	7732-18-5 Water	to 100%	None Established	None Established

### 3. Hazards Overview

**Primary Route Of Entry:** Ingestion

May be harmful if swallowed.

#### HMIS Hazard

Scale: 4 = Extreme, 3 = High, 2 = Moderate, 1 = Slight, 0 = Least

Health: 1      Flammability: 0      Reactivity: 0

**Carcinogenicity:** None:

#### **Other Health Related Comments:**

See Section 11, Toxicity

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**4. First Aid Measures**

**Eye Contact:** Flush with water for 15 minutes.

**Skin Contact:** Flush skin with water. Wash with soap and water.

**Ingestion:** Drink water, consult physician.

**Inhalation:** Remove to fresh air.

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**5. Fire Fighting Measures**

**Flash Point (Method Used):** N/A

**LEL:** N/A

**UEL:** N/A

**Extinguishing Media:** Not a fire hazard

**Special Fire Fighting Procedures:** N/A

**Unusual Fire & Explosion Hazard:** N/A

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**6. Accidental Release Measures**

1,10 Phenanthroline is toxic to aquatic organisms. Small spills can be mopped up and flushed to drain. Large spills: Absorb material on inert spill pads and dispose of as hazardous waste--not to sewer.

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**7. Handling & Storage**

Store tightly closed in cool, dry place.

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## 8. Exposure Controls/Personal Protection

### Ventilation

Normal

### Protection When Handling

Eye Protection Gloves Lab Coat

**Work/Hygenic Practices:** Avoid contact with eyes or skin. Wash after handling.

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## 9. Physical & Chemical Properties

**Appearance:** Red-orange Liquid

**Solubility In Water:** Soluble

**Odor:** None

**pH:** 5

**Vapor Density:** <1 (Air=1)

**Vapor Pressure:** <17 mm Hg @ 20 deg C

**Boiling Point:** >100 deg C

**Melting Point:** N/A

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## 10. Stability & Reactivity

**Stable:** Yes

**Conditions To Avoid:** N/A

**Incompatibility (Materials To Avoid):** Contact with nitric acid or other strong oxidizers

**Hazardous Decomposition Products:** CO, NOx, HCN

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## 11. Toxicological Information

Oral rat LD50: 132 mg/kg--toxic by ingestion (Supplier data for 1,10-Phenanthroline,anhydrous). Monohydrate form investigated as a mutagen.

**Target Organs:** N/A

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## 12. Ecological Information

Pure, solid 1,10-Phenanthroline Monohydrate expected to be toxic to aquatic organisms & persistent in the environment. #6410 reagent contains <1% of solid in water, but disposal to drain of quantities >1 liter is not recommended

## 13. Disposal Considerations

Small amount: Flush down drain. Large amount: Dispose according to federal, state and local regulations.

## 14. Transportation Information

Not Regulated For Transport

## 15. Regulatory Information

### Chemical Inventory Status

Hazard	Ingredient	USA	Europe	--- Canada ---		Australia	Japan
		TSCA	EC	DSL	NDSL		
Yes	66-71-7 1, 10 Phenanthroline anhydrous	Yes	Yes	Yes	No	Yes	Yes
Yes	7720-78-7 Ferrous Sulfate, anhydrous	Yes	Yes	Yes	No	Yes	Yes
No	7732-18-5 Distilled Water	Yes	Yes	Yes	No	Yes	Yes

### Federal, State, & International Regulations

Ingredient	--- SARA 302 ---		----- SARA 313 -----		CERCLA	RCRA 261.33	TSCA 8(D)
	RQ	TPQ	Listed	Chemical Category			
66-71-7 1, 10 Phenanthroline anhydrous	No	No	No	No	No	No	No
7720-78-7 Ferrous Sulfate, anhydrous	No	No	No	No	1000	No	No
7732-18-5 Distilled Water	No	No	No	No	No	No	No

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--- SARA 311/312 ---

**Hazard Categories**

----- Australia -----

**Hazchem  
Code**

**Poison  
Schedule**

**This MSDS Is  
WHMIS Compliant**

<b>Ingredient</b>	<b>Acute</b>	<b>Chronic</b>	<b>Fire</b>	<b>Pressure</b>	<b>Reactivity</b>	<b>Hazchem Code</b>	<b>Poison Schedule</b>	<b>This MSDS Is WHMIS Compliant</b>
66-71-7 1, 10 Phenanthroline anhydrous	Yes	Yes	No	No	No	None Allocated	None Allocated	
7720-78-7 Ferrous Sulfate, anhydrous	Yes	Yes	No	No	No	None Allocated	None Allocated	
7732-18-5 Distilled Water	No	No	No	No	No	None Allocated	None Allocated	
<b>product 6410 as a whole</b>	Yes	No	No	No	No	None Allocated	None Allocated	Yes

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**16. Other Information**

**Prepared By:** Regulatory Affairs Department

**Revised:** 3/28/2007

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