



PO Box 329 • 802 Washington Avenue • Chestertown, MD 21620 • USA
 Telephone Number 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)

MSDS

Material Safety Data Sheet

1. Product Identification

Product Code:	2776	Manufactured By:	LaMotte Company
Product Description:	Acid Phenanthroline Indicator		802 Washington Avenue Chestertown, MD 21620

2. Composition/Information on Ingredients

Hazardous	Name	CAS #	%	OSHA PEL	ACGIH TLV
Yes	Sulfuric Acid	7664-93-9	4.7	1 mg/cubic m	1 mg/cubic m
Yes	1,10-Phenanthroline Monohydrate	5144-89-8	2.5	N/E	N/E
No	Water	7732-18-8	To 100%		

3. Hazards Overview

Primary Route of Entry: Ingestion, Skin

Warning! Can cause burns to eyes and skin. Harmful or toxic if swallowed.

Carcinogenicity: None

HMIS Hazard: (Scale: 4 = Extreme, 3 = High, 2 = Moderate, 1 = Slight, 0 = Least)

Health: 2 Flammability: 0 Reactivity: 1

Other Health Related Comments:

4. First Aid Measures

Eye Contact: Flush thoroughly with water for 15 minutes. Consult a physician.

Skin Contact: Flush with water. Remove affected clothing and wash skin with soap and water.

Ingestion: Do not induce vomiting. Rinse out mouth. Drink plenty of water. Consult physician.

Inhalation: Remove to fresh air.

5. Fire Fighting Measures

Flash Point: N/A **LEL:** N/A **UEL:** N/A

Fire Rating

Extinguishing Media: Not a fire hazard

Special Fire Fighting Procedures: N/A

Hazardous Combustion and/or Decomposition Products: SO_x

Unusual Fire & Explosion Hazard: Can react with metal powders to form flammable hydrogen gas.

Product Code: 2776

Product Description: Acid Phenanthroline Indicator

6. Accidental Release Measures

Cover spill with sodium bicarbonate. Scoop up slurry and wash down drain with excess water.

7. Handling & Storage

Store in cool, dry, storage area away from heat and incompatible materials.

8. Exposure Controls/Personal Protection

Ventilation

Use with adequate ventilation.

Protection When Handling

Gloves Eye Protection Lab Coat

Work/Hygienic Practices: Avoid contact with skin and clothing. Wash after handling.

9. Physical & Chemical Properties

Appearance: Clear Colorless Liquid

Boiling Point: > 100 deg C

Melting Point: N/A

pH: <1

Odor: None

Vapor Density: <1(Air=1)

Solubility in Water: Soluble

Vapor Pressure: <17 mm@ 20 deg C

10. Stability & Reactivity

Stable: Yes

Conditions to Avoid: N/A

Materials to Avoid: Strong bases, metals, cyanides and sulfides.

Hazardous Decomposition Products: CO_x, NO_x, SO_x, Hydrogen Cyanide

11. Toxicological Information

oral rat LD50: 2140 mg/kg for sulfuric acid, concentrated

oral rat LD50: 132 mg/kg for 1, 10-Phenanthroline, anhydrous. Toxic if swallowed. ipr mouse 75 mg/kg.

1, 10-Phenanthroline, anhydrous: Investigated as a mutagen, reproductive effector.

Monohydrate: Investigated as a mutagen, teratogen in animal studies. Its reproductive hazard in humans is unknown.

Target Organs: Corrosive to all body parts

12. Ecological Information

Toxic to aquatic organisms. Avoid release to the environment.

13. Disposal Considerations

Add slowly to a solution of soda ash (sodium carbonate) and calcium hydroxide. Pour this neutralized solution down drain with excess water. Dispose according to federal, state and local regulations.

Product Code: 2776**Product Description: Acid Phenanthroline Indicator**

14. Transport Information**Proper Shipping Name:****DOT: SULFURIC ACID (<51% ACID)****IATA: SULPHURIC ACID (<51% ACID)****Hazard Class/Div: 8****UN 2796****Packing Group: II**

15. Regulatory Information**Chemical Inventory Status**

Ingredient	USA	Europe	---Canada---		Australia	Japan
	TSCA	EC	DSL	NDSL		
Sulfuric Acid (7664-93-9)	YES	YES	YES	NO	YES	YES
1,10-Phenanthroline, anhydrous (66-71-7)	YES	YES	YES	NO	YES	YES
Water (7732-18-8)	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				
Sulfuric Acid (7664-93-9)	1000	1000	YES	NO	1000	NO	NO
1,10-Phenanthroline, anhydrous (66-71-7)	NO	NO	NO	NO	NO	NO	NO
Water (7732-18-8)	NO	NO	NO	NO	NO	NO	NO

----- Australia -----

Ingredient	----- SARA 311/312 -----	Hazchem Code	Poison Schedule	This MSDS is WHMIS Compliant
	Hazard Categories			
Sulfuric Acid (7664-93-9)	Acute: Yes Chronic: Yes Fire: No Pressure: No Reactivity: Yes (Pure/Liquid)	2P	None allocated	
1,10-Phenanthroline, anhydrous (66-71-7)	Acute: Yes Chronic: Yes Fire: No Pressure: No Reactivity: No (Pure/Solid)	None allocated	None allocated	
For product #2776 liquid mixture, as a whole	Acute: Yes Chronic: No Fire: No Pressure: No Reactivity: No	2P	None allocated	Yes

16. Other Information**Prepared By: IP****Revised: 3/29/2007**