



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

Telephone Number For Information 410-778-3100

24 Hour Emergency Number (CHEM-TEL) 800-255-3924

MSDS

Material Safety Data Sheet

1. Product Identification

Product Code:

V-4450

Manufactured By:

LaMotte Company

Product Description:

Iron Reagent 1 solution

802 Washington Avenue

Chestertown, MD 21620

2. Composition/Information on Ingredients

Hazardous	Name	CAS #	%	OSHA PEL	ACGIH TLV
Yes	Sulfuric Acid	7664-93-9	4.8	1 mg/cubic m	1 mg/cubic m
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 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 metals to form hydrogen gas.

6. Accidental Release Measures

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

Product Code: V-4450

Product Description: Iron Reagent 1 solution

7. Handling & Storage

Store in cool, dry, storage area away from 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:	Colorless Clear 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 @ 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: SO_x

11. Toxicological Information

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

Target Organs: Corrosive to all body parts

12. Ecological Information

Information not available

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: V-4450

Product Description: Iron Reagent 1 solution

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
Water (7732-18-8)	YES	YES	YES	NO	YES	YES

Federal, State, & International Regulations

Ingredient	---SARA 302---		----- SARA 313 -----		RCRA 261.33	TSCA 8(D)
	RQ	TPQ	Listed Chemical Category	CERCLA		
Sulfuric Acid (7664-93-9)	1000	1000	YES	NO	1000 NO	NO
Water (7732-18-8)	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	2P	None Allocated	
	Pressure: No	Reactivity: Yes	(Pure/Liquid)			
For product #V-4450 liquid, taken as a whole	Acute:Yes	Chronic:No	Fire: No			Yes
	Pressure: No	Reactivity: No				

16. Other Information

Prepared By: IP

Revised: 3/07/2005



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MSDS

Material Safety Data Sheet

1. Product Identification

Product Code:

V-4451

Product Description:

Iron Reagent #2

Manufactured By:

LaMotte Company

802 Washington Avenue

Chestertown, MD 21620

2. Composition/Information on Ingredients

Hazardous	Name	CAS #	%	OSHA PEL	ACGIH TLV
Yes	Sodium Metabisulfite	7681-57-4	87	N/E	5mg/cubic m
Yes	Bipyridyl	366-18-7	7.7	N/E	N/E
No	Sodium Sulfite	7757-83-7	3	N/E	N/E
Yes	All other ingredients are proprietary NJTSRN 80100291-5006p	N/A	2.3	N/A	N/A

3. Hazards Overview

Primary Route of Entry: Ingestion Inhalation Skin

Harmful if swallowed or inhaled. May irritate eyes, nose, skin, respiratory tract. Severe allergic reaction in persons sensitive to sulfite. Reacts with acids and water, releasing toxic sulfur dioxide gas.

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

Health: 2 Flammability: 0 Reactivity: 1

Carcinogenicity: No known carcinogens in product V-4451

Other Health Related Comments:

Both Sodium Metabisulfite (IARC category 3), and Bipyridyl have been investigated as tumorigens, mutagens, reproductive effectors.

4. First Aid Measures

Eye Contact: Flush with water for 15 minutes. Get prompt medical attention.

Skin Contact: Wipe off excess material from skin then flush with water for 15 minutes. Wash skin with soap and water.

Ingestion: Rinse out mouth. Induce vomiting. Drink plenty of water. Call a doctor.

Inhalation: Move to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Product Code: V-4451

Product Description: Iron Reagent #2

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: Firefighters wear self-contained breathing apparatus

Hazardous Combustion and/or Decomposition Products: Contact w/ moisture (water, wet ice, etc.) can release sulfur dioxide gas.

Unusual Fire & Explosion Hazard: N/A

6. Accidental Release Measures

Avoid raising or breathing dust. Sweep up. Dissolve in water and flush down drain with excess water.

7. Handling & Storage

Keep in tightly closed container. Store in cool, dry, ventilated area away from heat, moisture, 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 inhalation of powder and contact with eyes or skin.

9. Physical & Chemical Properties

Appearance:	Gray Powder	Boiling Point:	N/A
		Melting Point:	Unknown
		pH:	6 (0.1g in 10mL water)
Odor:	None	Vapor Density:	N/A
Solubility in Water:	Soluble	Vapor Pressure:	N/A

10. Stability & Reactivity

Stable: Yes

Conditions to Avoid: Moisture, heat, flame, and ignition sources

Materials to Avoid: Acids, alkalis, oxidizers, water, sodium nitrite, aluminum powder.

Hazardous Decomposition Products: Sodium Metabisulfite gradually decomposes in air to sulfate, generating sulfurous acid gas. Contact with moisture (water, wet ice, etc.) can release toxic sulfur dioxide gas.

Product Code: V-4451**Product Description: Iron Reagent #2**

11. Toxicological Information

Oral rat LD50: 100 mg/kg for bipyridyl solid. Bipyridyl toxic internally. Investigated as a tumorigen, mutagen, and reproductive effector.

Target Organs: Skin Respiratory System

Aggravation of Pre-existing Condition: asthma

12. Ecological Information

Information not Available

13. Disposal Considerations

Dissolve in water. Flush down drain with excess water. Dispose according to federal, state and local regulations.

14. Transport Information

Not regulated for transport.

15. Regulatory Information**Chemical Inventory Status**

Ingredient	USA	Europe	---Canada---		Australia	Japan
	TSCA	EC	DSL	NDSL		
Sodium Metabisulfite (7681-57-4)	Yes	Yes	Yes	No	Yes	Yes
Bipyridyl (366-18-7)	Yes	Yes	Yes	No	Yes	Yes
Sodium Sulfite (7757-83-7)	Yes	Yes	Yes	No	Yes	Yes
All other ingredients are proprietary NJTSRN 80100291-5006p	Yes	Yes	Yes	No	Yes	No

Federal, State, & International Regulations

Ingredient	---SARA 302---		----- SARA 313 -----		CERCLA	RCRA 261.33	TSCA 8(d)
	RQ	TPQ	Listed	Chemical Category			
Sodium Metabisulfite (7681-57-4)	No	No	No	No	No	No	Yes
Bipyridyl (366-18-7)	No	No	No	No	No	No	No
Sodium Sulfite (7757-83-7)	No	No	No	No	No	No	No
All other ingredients are proprietary NJTSRN 80100291-5006p	No	No	Yes	No	1000	No	No

Product Code: V-4451

Product Description: Iron Reagent #2

Federal, State, & International Regulations

Ingredient	----- SARA 311/312 ----- Hazard Categories	----- Australia -----		This MSDS is WHMIS Compliant
		Hazchem Code	Poison Schedule	
Sodium Metabisulfite (7681-57-4)	Acute: Yes Chronic: No Fire: No Pressure: No Reactivity: Yes (Mixture/Solid)	None allocated	None allocated	
Bipyridyl (366-18-7)	Acute: Yes Chronic: No Fire: No Pressure: No Reactivity: No	2(Z)	None allocated	
Sodium Sulfite (7757-83-7)	Acute: No Chronic: No Fire: No Pressure: No Reactivity: No	None allocated	None allocated	
All other ingredients are proprietary NJTSRN 80100291-5006p	Acute: Yes Chronic: No Fire: Yes Pressure: No Reactivity: Yes (Mixture/Solid)	4Y	S6	
For reagent V-4451 powder mixture as a whole	Acute: Yes Chronic: No Fire: No Pressure: No Reactivity: Yes			Yes

16. Other Information

Prepared By: IP

Revised: 3/07/2005