



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: 2243

Product Description: Cresol Red Indicator, 1%

Manufactured By: LaMotte Company

802 Washington Avenue

Chestertown, MD 21620

2. Composition/Information On Ingredients

Hazard	CAS#/Name	%	PEL	TLV
Yes	1310-73-2 Sodium Hydroxide	0.2	C 2 mg/cubic m	C 2 mg/cubic m
No	1733-12-6 Cresol Red	1		
No	7732-18-5 Water	to 100%		

3. Hazards Overview

Primary Route Of Entry: Ingestion Skin

May stain skin.

HMIS Hazard

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

Health: 0 Flammability: 0 Reactivity: 0

Carcinogenicity: None

Other Health Related Comments:

Product Code: 2243

Product Description: Cresol Red Indicator, 1%

4. First Aid Measures

Eye Contact: Flush thoroughly with water.

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

Ingestion: Drink water. Consult physician.

Inhalation: N/A

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

6. Accidental Release Measures

Mop up and flush down drain.

7. Handling & Storage

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

8. Exposure Controls/Personal Protection

Ventilation

Normal

Protection When Handling

Gloves Eye Protection

Work/Hygenic Practices: N/A

9. Physical & Chemical Properties

Appearance: Dark Red Liquid

Solubility In Water: Soluble

Odor: None

pH: 8

Vapor Density: <1 (Air=1)

Vapor Pressure: <17 @ 20 deg C

Boiling Point: ca. 100 degC

Melting Point: ca. 0 deg C

10. Stability & Reactivity

Stable: Yes

Conditions To Avoid: N/A

Incompatibility (Materials To Avoid): N/A

Hazardous Decomposition Products: N/A

11. Toxicological Information

Non-toxic

Target Organs: N/A

12. Ecological Information

Information Not Yet Available

13. Disposal Considerations

Flush down drain. Dispose according to federal, state and local regulations.

15. Regulatory Information

Chemical Inventory Status

Hazard	Ingredient	USA	Europe	--- Canada ---		Australia	Japan
		TSCA	EC	DSL	NDSL		
Yes	1310-73-2 Sodium Hydroxide	Yes	Yes	Yes	No	Yes	Yes
No	1733-12-6 Cresol Red	Yes	Yes	Yes	No	Yes	No
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			
1310-73-2 Sodium Hydroxide	No	No	No	No	1000	No	No
1733-12-6 Cresol Red	No	No	No	No	No	No	No
7732-18-5 Distilled Water	No	No	No	No	No	No	No

Ingredient	Acute	--- SARA 311/312 --- Hazard Categories				----- Australia -----		This MSDS Is WHMIS Compliant
		Chronic	Fire	Pressure	Reactivity	Hazchem Code	Poison Schedule	
1310-73-2 Sodium Hydroxide	Yes	No	No	No	Yes	2R	S6	
1733-12-6 Cresol Red	No	No	No	No	No	None Allocated	None Allocated	
7732-18-5 Distilled Water	No	No	No	No	No	None Allocated	None Allocated	

Product Code: 2243

Product Description: Cresol Red Indicator, 1%

product 2243 No No No No No None Allocated None Allocated Yes
as a whole

16. Other Information

Prepared By: IP, Regulatory Affairs Department

Revised: 10/11/2005



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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: 5702

Product Description: Nitrogen Extracting Solution

Manufactured By: LaMotte Company
802 Washington Avenue
Chestertown, MD 21620

2. Composition/Information On Ingredients

Hazard	CAS#/Name	%	PEL	TLV
Yes	7647-01-0 Hydrochloric Acid	0.8	C 5 ppm	C 2 ppm
	9003-05-8 Magnifloc 905N (polyacrylamide flocculant)	<0.1		
No	7732-18-5 Water	to 100%		

3. Hazards Overview

Primary Route Of Entry: Skin Ingestion

May irritate eyes and skin. 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:

Product Code: 5702

Product Description: Nitrogen Extracting Solution

4. First Aid Measures

Eye Contact: Flush with water for 15 minutes. Consult physician if irritation persists.

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

Ingestion: Rinse mouth, drink glass of water. Consult physician.

Inhalation: N/A

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

6. Accidental Release Measures

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

7. Handling & Storage

Store in cool, dry area.

8. Exposure Controls/Personal Protection

Ventilation

Normal

Protection When Handling

Eye Protection Gloves Lab Coat

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

9. Physical & Chemical Properties

Appearance:	Clear Colorless Liquid	Vapor Density:	<1(Air=1)
Solubility In Water:	Soluble	Vapor Pressure:	ca.17 mm Hg @20 deg C
Odor:	None	Boiling Point:	ca.100 deg C
pH:	<1	Melting Point:	N/A

10. Stability & Reactivity

Stable:	Yes
Conditions To Avoid:	Heat
Incompatibility (Materials To Avoid):	N/A
Hazardous Decomposition Products:	N/A

11. Toxicological Information

Oral rabbit LD50: 900 mg/kg for hydrochloric acid concentrated; investigated as a tumorigen, mutagen, reproductive effector

Target Organs: Skin

Product Code: 5702

Product Description: Nitrogen Extracting Solution

12. Ecological Information

Information Not Yet Available

13. Disposal Considerations

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

14. Transportation Information

Proper Shipping Name:

DOT: HYDROCHLORIC ACID

IATA: HYDROCHLORIC ACID

Hazard Class/Div:

DOT: 8

IATA: 8

UN: 1789

Packing Group: III

15. Regulatory Information

Chemical Inventory Status

Hazard	Ingredient	USA	Europe	--- Canada ---		Australia	Japan
		TSCA	EC	DSL	NDSL		
Yes	7647-01-0 Hydrochloric Acid	Yes	Yes	Yes	No	Yes	Yes
No	7732-18-5 Distilled Water	Yes	Yes	Yes	No	Yes	Yes

Product Code: 5702

Product Description: Nitrogen Extracting Solution

Federal, State, & International Regulations

Ingredient	--- SARA 302 ---		----- SARA 313 -----		CERCLA	RCRA 261.33	TSCA 8(D)
	RQ	TPQ	Listed	Chemical Category			
7647-01-0 Hydrochloric Acid	5000	500	Yes	No	5000	No	No
7732-18-5 Distilled Water	No	No	No	No	No	No	No

Product Code: 5702

Product Description: Nitrogen Extracting Solution

--- SARA 311/312 ---

----- Australia -----

Hazard Categories

**Hazchem
Code**

**Poison
Schedule**

**This MSDS Is
WHMIS Compliant**

Ingredient **Acute** **Chronic** **Fire** **Pressure** **Reactivity**

7647-01-0 Yes Yes No No No 2R None Allocated
Hydrochloric Acid

7732-18-5 No No No No No None Allocated None Allocated
Distilled Water

product Yes No No No No None Allocated None Allocated Yes
5702
as a whole

16. Other Information

Prepared By: IP, Regulatory Affairs Department

Revised: 7/26/2006



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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: 5703

Product Description: Nitrogen Indicator Powder

Manufactured By: LaMotte Company

802 Washington Avenue

Chestertown, MD 21620

2. Composition/Information On Ingredients

Hazard	CAS#/Name	%	PEL	TLV
Yes	10034-96-5 Manganous Sulfate Monohydrate	1.5	C 5 mg/cubic m (comp. as Mn)	0.2 mg/cubic m (inorg comp as Mn)
Yes	7440-66-6 Zinc Dust	6	N/E	10 mg/cubic m, ZnO fume
Yes	7727-43-7 Barium Sulfate	63	10 mg/cubic m total dust	10 mg/cubic m total dust
Yes	63-74-1 Sulfanilamide	<1	N/E	N/E
Yes	1465-25-4 N-1-Naphthyl-ethylenediamine dihydrochloride	<1	N/E	N/E
Yes	57-50-1 Sugar	28	5 mg/cubic m (respirable)	10 mg/cubic m (total dust)

Product Code: 5703

Product Description: Nitrogen Indicator Powder

3. Hazards Overview

Primary Route Of Entry: Ingestion Inhalation Skin

Harmful by dust inhalation and if swallowed. May cause skin irritation.

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:

Both manganese sulfate and sulfanilamide are possible mutagens; mutagens can cause heritable genetic damage.

4. First Aid Measures

Eye Contact: Flush thoroughly with water. Consult physician if irritation persists.

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

Ingestion: Drink water. Consult a physician.

Inhalation: Remove to fresh air.

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

6. Accidental Release Measures

Small quantity: Sweep up, dissolve in water and flush down drain with excess water. Large quantity: Sweep up. Place in clean, dry, closed container. Send to approved landfill or to hazardous waste disposal.

7. Handling & Storage

Store tightly closed in cool, dry place away from heat, moisture, and incompatible materials.

8. Exposure Controls/Personal Protection

Ventilation

Mechanical

Use with good ventilation.

Protection When Handling

Eye Protection Gloves Lab Coat

Work/Hygenic Practices: Avoid contact with skin and clothing and inhalation of dust. Wash after handling.

9. Physical & Chemical Properties

Appearance: Off white Powder

Solubility In Water: Partial

Odor: None

pH: 6 (0.1g/10mL water)

Vapor Density: N/A

Vapor Pressure: N/A

Boiling Point: N/A

Melting Point: Unknown

10. Stability & Reactivity

Stable: Yes

Conditions To Avoid: Heat, moisture

Incompatibility (Materials To Avoid): Strong acids

Hazardous Decomposition Products: N/A

Product Code: 5703

Product Description: Nitrogen Indicator Powder

11. Toxicological Information

Manganous sulfate monohydrate: Oral rat LD50: 2150 mg/kg. Anhydrous investigated as a tumorigen, mutagen, reproductive effector.

Target Organs: Skin

12. Ecological Information

Information Not Yet Available

13. Disposal Considerations

Dispose according to federal, state and local regulations.

14. Transportation Information

Not Regulated For Transport

15. Regulatory Information

Hazard	Ingredient	<u>Chemical Inventory Status</u>					
		USA TSCA	Europe EC	--- Canada --- DSL NDSL		Australia	Japan
Yes	7785-87-7 Manganese Sulfate, anhydrous	Yes	Yes	Yes	No	Yes	Yes
Yes	7440-66-6 Zinc Dust	Yes	Yes	Yes	No	Yes	No
Yes	7727-43-7 Barium Sulfate	Yes	Yes	Yes	No	Yes	Yes
Yes	63-74-1 Sulfanilamide	Yes	Yes	Yes	No	Yes	Yes
Yes	1465-25-4 N-1-(Naphthyl) ethylenediamine dihydrochloride	Yes	Yes	Yes	No	Yes	No
Yes	57-50-1 Sucrose	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			
7785-87-7 Manganese Sulfate, anhydrous	No	No	No	Manganese cmpnd	1	No	No
7440-66-6 Zinc Dust	No	No	Yes	No	1000	No	No
7727-43-7 Barium Sulfate	No	No	No	No	No	No	No
63-74-1 Sulfanilamide	No	No	No	No	No	No	No
1465-25-4 N-1-(Naphthyl) ethylenediamine dihydrochloride	No	No	No	No	No	No	No
57-50-1 Sucrose	No	No	No	No	No	No	No

Product Code: 5703

Product Description: Nitrogen Indicator Powder

--- SARA 311/312 ---

----- Australia -----

Hazard Categories

**Hazchem
Code**

**Poison
Schedule**

**This MSDS Is
WHMIS Compliant**

Ingredient	Acute	Chronic	Fire	Pressure	Reactivity	Hazchem Code	Poison Schedule	This MSDS Is WHMIS Compliant
7785-87-7 Manganese Sulfate, anhydrous	Yes	Yes	No	No	No	None Allocated	None Allocated	
7440-66-6 Zinc Dust	Yes	No	Yes	No	Yes	4Y	S6	
7727-43-7 Barium Sulfate	Yes	No	No	No	No	None Allocated	None Allocated	
63-74-1 Sulfanilamide	Yes	No	No	No	No	None Allocated	None Allocated	
1465-25-4 N-1-(Naphthyl) ethylenediamine dihydrochloride	Yes	No	No	No	No	None Allocated	None Allocated	
57-50-1 Sucrose	No	No	Yes	No	No	None Allocated	None Allocated	
product 5703 as a whole	Yes	Yes	No	No	No	None Allocated	None Allocated	Yes

16. Other Information

Prepared By: IP, Regulatory Affairs Department

Revised: 7/31/2006



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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: 5701

Product Description: pH Indicator Solution

Manufactured By: LaMotte Company
802 Washington Avenue
Chestertown, MD 21620

2. Composition/Information On Ingredients

Hazard	CAS#/Name	%	PEL	TLV
Yes	76-60-8 Bromcresol Green	<0.01	N/E	N/E
Yes	115-40-2 Bromcresol Purple	<0.01	N/E	N/E
No	1733-12-6 Cresol Red	<0.01		
	N/A Magnifloc (non-ionic polyacrylamide)	<0.01		
No	7732-18-5 Water	to 100%		

3. Hazards Overview

Primary Route Of Entry: Skin

HMIS Hazard

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

Health: 0 Flammability: 0 Reactivity: 0

Carcinogenicity: None:

Other Health Related Comments:

Non-toxic, non-hazardous

4. First Aid Measures

Eye Contact: Flush with water. Consult physician.

Skin Contact: Wash with soap and water.

Ingestion: Drink water. Consult physician.

Inhalation: N/A

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

6. Accidental Release Measures

Mop up and wash down drain with excess water.

7. Handling & Storage

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

8. Exposure Controls/Personal Protection

Ventilation

Normal

Protection When Handling

Eye Protection Gloves Lab Coat

Work/Hygenic Practices: Wash after handling. (May skin or clothing).

9. Physical & Chemical Properties

Appearance: Blue-green Liquid

Solubility In Water: Soluble

Odor: None

pH: 7

Vapor Density: Unknown

Vapor Pressure: Unknown

Boiling Point: ca. 100 deg C

Melting Point: ca. 0 deg C

10. Stability & Reactivity

Stable: Yes

Conditions To Avoid: N/A

Incompatibility (Materials To Avoid): N/A

Hazardous Decomposition Products: N/A

11. Toxicological Information

Target Organs: N/A

12. Ecological Information

Information Not Yet Available

13. Disposal Considerations

Pour down drain with excess water. Dispose according to federal, state and local regulations.

14. Transportation Information

Not Regulated For Transport

15. Regulatory Information

Hazard	Ingredient	Chemical Inventory Status					
		USA TSCA	Europe EC	--- Canada --- DSL NDSL		Australia	Japan
Yes	76-60-8 Bromcresol Green	Yes	Yes	Yes	No	Yes	No
Yes	115-40-2 Bromcresol Purple	Yes	Yes	Yes	No	Yes	Yes
No	1733-12-6 Cresol Red	Yes	Yes	Yes	No	Yes	No
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			
76-60-8 Bromcresol Green	No	No	No	No	No	No	No
115-40-2 Bromcresol Purple	No	No	No	No	No	No	No
1733-12-6 Cresol Red	No	No	No	No	No	No	No
7732-18-5 Distilled Water	No	No	No	No	No	No	No

Product Code: 5701

Product Description: pH Indicator Solution

--- SARA 311/312 ---

----- Australia -----

Hazard Categories

**Hazchem
Code**

**Poison
Schedule**

**This MSDS Is
WHMIS Compliant**

Ingredient	Acute	Chronic	Fire	Pressure	Reactivity			
76-60-8 Bromcresol Green	Yes	No	No	No	No	None Allocated	None Allocated	
115-40-2 Bromcresol Purple	Yes	No	No	No	No	None Allocated	None Allocated	
1733-12-6 Cresol Red	No	No	No	No	No	None Allocated	None Allocated	
7732-18-5 Distilled Water	No	No	No	No	No	None Allocated	None Allocated	
product 5701 as a whole	No	No	No	No	No	None Allocated	None Allocated	Yes

16. Other Information

Prepared By: IP, Regulatory Affairs Department

Revised: 1/5/2006



MSDS

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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: 5704

Product Description: Phosphorus Extracting Solution

Manufactured By: LaMotte Company

802 Washington Avenue

Chestertown, MD 21620

2. Composition/Information On Ingredients

Hazard	CAS#/Name	%	PEL	TLV
Yes	64-19-7 Acetic Acid	3	10 ppm	25 mg/cubic m
Yes	6131-90-4 Sodium Acetate	10	N/E	N/E
No	7732-18-5 Water	to 100%		

3. Hazards Overview

Primary Route Of Entry: Skin

May irritate eyes and skin.

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:

Product Code: 5704

Product Description: Phosphorus Extracting Solution

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 several glasses of water.

Inhalation: Remove to fresh air.

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

6. Accidental Release Measures

Mop up and flush down drain with excess water.

7. Handling & Storage

Store in cool, dry area away from incompatible materials.

8. Exposure Controls/Personal Protection

Ventilation

Normal

Protection When Handling

Eye Protection Gloves

Work/Hygenic Practices: Wash hands after handling.

9. Physical & Chemical Properties

Appearance: Clear Colorless Liquid

Solubility In Water: Soluble

Odor: Vinegar

pH: 5

Vapor Density: Unknown

Vapor Pressure: Unknown

Boiling Point: Unknown

Melting Point: N/A

10. Stability & Reactivity

Stable: Yes

Conditions To Avoid: N/A

Incompatibility (Materials To Avoid): Strong acids

Hazardous Decomposition Products: N/A

11. Toxicological Information

Non-toxic

Target Organs: N/A

Product Code: 5704

Product Description: Phosphorus Extracting Solution

12. Ecological Information

Information Not Yet Available

13. Disposal Considerations

Pour down drain with excess water. 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	64-19-7 Acetic Acid	Yes	Yes	Yes	No	Yes	Yes
Yes	127-09-3 Sodium Acetate, 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			
64-19-7 Acetic Acid	No	No	No	No	5000	No	No
127-09-3 Sodium Acetate, anhydrous	No	No	No	No	No	No	No
7732-18-5 Distilled Water	No	No	No	No	No	No	No

Product Code: 5704

Product Description: Phosphorus Extracting Solution

--- SARA 311/312 ---

----- Australia -----

Hazard Categories

Ingredient	Acute	Chronic	Fire	Pressure	Reactivity	Hazchem Code	Poison Schedule	This MSDS Is WHMIS Compliant
64-19-7 Acetic Acid	Yes	Yes	Yes	No	Yes	2P	S6	
127-09-3 Sodium Acetate, anhydrous	Yes	No	No	No	No	None Allocated	None Allocated	
7732-18-5 Distilled Water	No	No	No	No	No	None Allocated	None Allocated	
product 5704 as a whole	No	No	No	No	No	None Allocated	None Allocated	Yes

16. Other Information

Prepared By: IP, Regulatory Affairs Department

Revised: 8/1/2006



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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: 5705

Product Description: Phosphorus Indicator Solution

Manufactured By: LaMotte Company

802 Washington Avenue

Chestertown, MD 21620

2. Composition/Information On Ingredients

Hazard	CAS#/Name	%	PEL	TLV
Yes	64-19-7 Acetic Acid	12	10 ppm	25 mg/cubic m
Yes	10102-40-6 Sodium Molybdate dihydrate	2.5	5 mg/cubic m (Mo)	10 mg/cubic m (Mo)
No	7732-18-5 Water	to 100%		

3. Hazards Overview

Primary Route Of Entry: Skin Ingestion Inhalation

Vapors and liquid cause irritation to eyes, skin, and respiratory system. Harmful if swallowed.

HMIS Hazard

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

Health: 1 Flammability: 0 Reactivity: 1

Carcinogenicity: None:

Other Health Related Comments:

Product Code: 5705

Product Description: Phosphorus Indicator Solution

4. First Aid Measures

Eye Contact: Immediately flush with water for 15 minutes. Consult a physician.

Skin Contact: Immediately flush with water while removing affected clothing. Wash skin with soap and water.

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

Inhalation: Remove to fresh air.

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

6. Accidental Release Measures

Wear gloves and eye protection. Ventilate area. Avoid breathing vapor. Neutralize with sodium bicarbonate. Mop up carefully and pour down drain with excess water.

7. Handling & Storage

Store tightly closed in cool, dry location away from incompatible materials. Use with adequate ventilation.

8. Exposure Controls/Personal Protection

Ventilation

Normal

Protection When Handling

Gloves Eye Protection Lab Coat

Work/Hygenic Practices: Avoid contact with skin. Use with adequate ventilation.

9. Physical & Chemical Properties

Appearance: Clear Colorless Liquid

Solubility In Water: Soluble

Odor: Vinegar

pH: 3

Vapor Density: Unknown

Vapor Pressure: Unknown

Boiling Point: Unknown

Melting Point: N/A

10. Stability & Reactivity

Stable: Yes

Conditions To Avoid: Heat

Incompatibility (Materials To Avoid): Strong alkali, sulfuric acid, metals

Hazardous Decomposition Products: CO_x

11. Toxicological Information

Oral rat LD50: acetic acid, conc. 3310 mg/kg. Oral rat LD50: 4g/kg for sodium molybdate dihydrate. Sodium molybdate dihydrate investigated as a reproductive effector. Anhydrous investigated as both reproductive effector & mutagen.

Target Organs: Skin

Product Code: 5705

Product Description: Phosphorus Indicator Solution

12. Ecological Information

Information Not Yet Available

13. Disposal Considerations

Wear gloves and eye protection. Neutralize with dilute sodium hydroxide or sodium bicarbonate. Flush down drain with excess water. Dispose according to federal, state and local regulations.

14. Transportation Information

Proper Shipping Name:

DOT: ACETIC ACID SOLUTION
>10%, <50% acid

IATA: ACETIC ACID SOLUTION
>10%, <50% acid

Hazard Class/Div:

DOT: 8

IATA: 8

UN: 2790

Packing Group: III

15. Regulatory Information

Chemical Inventory Status

Hazard	Ingredient	USA	Europe	--- Canada ---		Australia	Japan
		TSCA	EC	DSL	NDSL		
Yes	64-19-7 Acetic Acid	Yes	Yes	Yes	No	Yes	Yes
Yes	7631-95-0 Sodium Molybdate, 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			
64-19-7 Acetic Acid	No	No	No	No	5000	No	No
7631-95-0 Sodium Molybdate, anhydrous	No	No	No	No	No	No	No
7732-18-5 Distilled Water	No	No	No	No	No	No	No

Product Code: 5705

Product Description: Phosphorus Indicator Solution

--- SARA 311/312 ---

----- Australia -----

Hazard Categories

Ingredient	Acute	Chronic	Fire	Pressure	Reactivity	Hazchem Code	Poison Schedule	This MSDS Is WHMIS Compliant
64-19-7 Acetic Acid	Yes	Yes	Yes	No	Yes	2P	S6	
7631-95-0 Sodium Molybdate, anhydrous	Yes	No	No	No	No	None Allocated	None Allocated	
7732-18-5 Distilled Water	No	No	No	No	No	None Allocated	None Allocated	
product 5705 as a whole	Yes	Yes	No	No	No	2P	S5	Yes

16. Other Information

Prepared By: IP, Regulatory Affairs Department

Revised: 8/1/2006



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: 5157

Product Description: Phosphorus Reagent #3 tablets

Manufactured By: LaMotte Company

802 Washington Avenue

Chestertown, MD 21620

2. Composition/Information On Ingredients

Hazard	CAS#/Name	%	PEL	TLV
Yes	10025-69-1 Stannous Chloride Dihydrate	1.5	2 mg/cubic m as Sn	2 mg/cubic m as Sn
Yes	7447-40-7 Potassium Chloride	>98%	15 mg/cubic m (dust)	10 mg/cubic m

3. Hazards Overview

Primary Route Of Entry: Ingestion

May irritate eyes and skin. Ingestion of large quantities may cause gastrointestinal irritation and circulatory problems.

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:

Product Code: 5157

Product Description: Phosphorus Reagent #3 tablets

4. First Aid Measures

Eye Contact: Flush thoroughly with water.

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

Ingestion: Drink glass of water. Consult a physician.

Inhalation: N/A

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

6. Accidental Release Measures

Sweep up. Dissolve in water and flush down drain with excess water.

7. Handling & Storage

Store in cool, dry place away from heat and moisture.

Product Code: 5157

Product Description: Phosphorus Reagent #3 tablets

8. Exposure Controls/Personal Protection

Ventilation

Normal

Protection When Handling

Eye Protection

Work/Hygenic Practices: Avoid handling tablets. Wash after handling.

9. Physical & Chemical Properties

Appearance:	White Tablet	Vapor Density:	N/A
Solubility In Water:	Soluble	Vapor Pressure:	N/A
Odor:	None	Boiling Point:	N/A
pH:	3 (1 tablet/10mL water)	Melting Point:	ca.750 deg C

10. Stability & Reactivity

Stable:	Yes
Conditions To Avoid:	Moisture, extreme heat or cold
Incompatibility (Materials To Avoid):	N/A
Hazardous Decomposition Products:	N/A

11. Toxicological Information

Oral rat LD50: 2600 mg/kg for potassium chloride; investigated as a mutagen. Stannous chloride, anhydrous--Oral rat LD50:700 mg/kg. Investigated as a tumorigen, mutagen, reproductive effector. Hydrate: investigated as a mutagen, reproductive effector.

Target Organs: Unknown

Pre-Existing Conditions Aggravated By Exposure: Persons with impaired kidney function

Product Code: 5157

Product Description: Phosphorus Reagent #3 tablets

12. Ecological Information

Information Not Yet Available

13. Disposal Considerations

Dissolve in water and flush down drain with excess water. 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	7772-99-8 Stannous Chloride anhydrous	Yes	Yes	Yes	No	Yes	Yes
Yes	7447-40-7 Potassium Chloride	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			
7772-99-8 Stannous Chloride anhydrous	No	No	No	No	No	No	No
7447-40-7 Potassium Chloride	No	No	No	No	No	No	No

Product Code: 5157

Product Description: Phosphorus Reagent #3 tablets

--- SARA 311/312 ---

Hazard Categories

----- Australia -----

**Hazchem
Code**

**Poison
Schedule**

**This MSDS Is
WHMIS Compliant**

Ingredient	Acute	Chronic	Fire	Pressure	Reactivity	Hazchem Code	Poison Schedule	This MSDS Is WHMIS Compliant
7772-99-8 Stannous Chloride anhydrous	Yes	Yes	No	No	No	None Allocated	None Allocated	
7447-40-7 Potassium Chloride	Yes	No	No	No	No	None Allocated	None Allocated	
product 5157 as a whole	Yes	No	No	No	No	None Allocated	None Allocated	Yes

16. Other Information

Prepared By: IP, Regulatory Affairs Department

Revised: 7/28/2006



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: 5156

Product Description: Phosphorus Reagent 2

Manufactured By: LaMotte Company

802 Washington Avenue

Chestertown, MD 21620

2. Composition/Information On Ingredients

Hazard	CAS#/Name	%	PEL	TLV
Yes	64-19-7 Acetic Acid	10	10 ppm	25 mg/cubic m
Yes	10102-40-6 Sodium Molybdate, dihydrate	2.5	5 mg/cubic m (Mo)	10 mg/cubic m (Mo)
No	7732-18-5 Water	to 100%		

3. Hazards Overview

Primary Route Of Entry: Skin Ingestion Inhalation

May be harmful if swallowed. May irritate eyes, nose, skin and respiratory tract.

HMIS Hazard

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

Health: 1 Flammability: 0 Reactivity: 1

Carcinogenicity: None:

Other Health Related Comments:

Product Code: 5156

Product Description: Phosphorus Reagent 2

4. First Aid Measures

Eye Contact: Immediately flush with water for 15 minutes. Consult a physician.

Skin Contact: Immediately flush with water while removing affected clothing . Wash skin with soap and water.

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

Inhalation: Remove to fresh air.

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

6. Accidental Release Measures

Wear gloves and eye protection. Ventilate area. Avoid breathing vapor. Cover with sodium bicarbonate. Mop up neutralized slurry and wash down drain with excess water.

7. Handling & Storage

Store tightly closed in cool, dry, location away from incompatible materials. Use with adequate ventilation.

8. Exposure Controls/Personal Protection

Ventilation

Normal

Use with adequate ventilation.

Protection When Handling

Eye Protection Gloves Lab Coat

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

9. Physical & Chemical Properties

Appearance: Clear Colorless Liquid

Solubility In Water: Soluble

Odor: Vinegar

pH: 3

Vapor Density: Unknown

Vapor Pressure: Unknown

Boiling Point: Unknown

Melting Point: N/A

10. Stability & Reactivity

Stable: Yes

Conditions To Avoid: Heat

Incompatibility (Materials To Avoid): Bases, metals

Hazardous Decomposition Products: CO_x

11. Toxicological Information

Oral Rat LD50: 3310mg/kg for acetic acid; 4g/kg for sod. molybdate, anhydrous. Sodium molybdate, hydrate investigated as a reproductive effector. Anhydrous investigated as both reproductive effector & mutagen.

Target Organs: Skin

12. Ecological InformationInformation Not Yet Available

13. Disposal Considerations

Wear gloves and eye protection. Neutralize with dilute sodium hydroxide or sodium bicarbonate. Flush down drain with excess water. Dispose according to federal, state and local regulations.

14. Transportation Information**Proper Shipping Name:**

DOT: ACETIC ACID SOLUTION
>10, <50% ACID

IATA: ACETIC ACID SOLUTION
>10, <50% ACID

Hazard Class/Div:

DOT: 8

IATA: 8

UN: 2790

Packing Group: III

15. Regulatory Information**Chemical Inventory Status**

Hazard	Ingredient	USA	Europe	--- Canada ---		Australia	Japan
		TSCA	EC	DSL	NDSL		
Yes	64-19-7 Acetic Acid	Yes	Yes	Yes	No	Yes	Yes
Yes	7631-95-0 Sodium Molybdate, 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			
64-19-7 Acetic Acid	No	No	No	No	5000	No	No
7631-95-0 Sodium Molybdate, anhydrous	No	No	No	No	No	No	No
7732-18-5 Distilled Water	No	No	No	No	No	No	No

Product Code: 5156

Product Description: Phosphorus Reagent 2

--- SARA 311/312 ---

Hazard Categories

----- Australia -----

**Hazchem
Code**

**Poison
Schedule**

**This MSDS Is
WHMIS Compliant**

Ingredient **Acute** **Chronic** **Fire** **Pressure** **Reactivity**

64-19-7
Acetic Acid

Yes Yes Yes No Yes

2P

S6

7631-95-0
Sodium Molybdate, anhydrous

Yes No No No No

None Allocated

None Allocated

7732-18-5
Distilled Water

No No No No No

None Allocated

None Allocated

**product
5156
as a whole**

Yes Yes No No No

2P

S5

Yes

16. Other Information

Prepared By: IP, Regulatory Affairs Department

Revised: 8/1/2006



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: 5706

Product Description: Phosphorus Test Tablet

Manufactured By: LaMotte Company

802 Washington Avenue

Chestertown, MD 21620

2. Composition/Information On Ingredients

Hazard	CAS#/Name	%	PEL	TLV
Yes	10025-69-1 Stannous Chloride Dihydrate	5	2 mg/cubic m as Sn	2 mg/cubic m as Sn
Yes	7447-40-7 Potassium Chloride	95	15 mg/cubic m (dust)	10 mg/cubic m

3. Hazards Overview

Primary Route Of Entry: Skin Ingestion

May irritate eyes and skin. Ingestion of large quantities may cause gastrointestinal irritation and circulatory problems.

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:

Tablets are acidic in water (pH3) and may irritate mouth and throat if swallowed, or irritate skin if handled repeatedly. See Section 11.

Product Code: 5706

Product Description: Phosphorus Test Tablet

4. First Aid Measures

Eye Contact: Flush thoroughly with water.

Skin Contact: Rinse skin. Wash with soap and water.

Ingestion: Drink 1 - 2 glasses of water. If more than a few tablets have been swallowed call a doctor..

Inhalation: N/A

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

6. Accidental Release Measures

Sweep up. Avoid crushing tablets and generating dust. Dissolve in water and flush down drain with excess water.

7. Handling & Storage

Store in cool, dry place away from incompatible materials.

Product Code: 5706

Product Description: Phosphorus Test Tablet

8. Exposure Controls/Personal Protection

Ventilation

Normal

Protection When Handling

Eye Protection

Work/Hygenic Practices: N/A

9. Physical & Chemical Properties

Appearance:	White Tablet	Vapor Density:	N/A
Solubility In Water:	Soluble	Vapor Pressure:	N/A
Odor:	None	Boiling Point:	N/A
pH:	3 (1 tablet/10mL water)	Melting Point:	ca. 750 degC

10. Stability & Reactivity

Stable:	Yes
Conditions To Avoid:	Heat, moisture
Incompatibility (Materials To Avoid):	N/A
Hazardous Decomposition Products:	N/A

11. Toxicological Information

Oral rat LD50: 700 mg/kg for stannous chloride, anhydrous. 2600 mg/kg for potassium chloride. Stannous Chloride dihydrate investigated as a mutagen, reproductive effector. KCl investigated as a mutagen.

Target Organs: GI System Skin

Pre-Existing Conditions Aggravated By Exposure: Persons w/ impaired kidney function

12. Ecological Information

Information Not Yet Available

13. Disposal Considerations

Dissolve in water and flush down drain with excess water. 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	7772-99-8 Stannous Chloride anhydrous	Yes	Yes	Yes	No	Yes	Yes
Yes	7447-40-7 Potassium Chloride	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			
7772-99-8 Stannous Chloride anhydrous	No	No	No	No	No	No	No
7447-40-7 Potassium Chloride	No	No	No	No	No	No	No

Product Code: 5706

Product Description: Phosphorus Test Tablet

--- SARA 311/312 ---

Hazard Categories

----- Australia -----

**Hazchem
Code**

**Poison
Schedule**

**This MSDS Is
WHMIS Compliant**

Ingredient	Acute	Chronic	Fire	Pressure	Reactivity			
7772-99-8 Stannous Chloride anhydrous	Yes	Yes	No	No	No	None Allocated	None Allocated	
7447-40-7 Potassium Chloride	Yes	No	No	No	No	None Allocated	None Allocated	
product 5706 as a whole	Yes	No	No	No	No	None Allocated	None Allocated	Yes

16. Other Information

Prepared By: IP, Regulatory Affairs Department

Revised: 8/1/2006



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: 5707

Product Description: Potassium Extracting Solution

Manufactured By: LaMotte Company

802 Washington Avenue

Chestertown, MD 21620

2. Composition/Information On Ingredients

Hazard	CAS#/Name	%	PEL	TLV
Yes	64-19-7 Acetic Acid	1.2	10 ppm	25 mg/cubic m
Yes	6131-90-4 Sodium Acetate	5	N/E	N/E
No	7732-18-5 Water	to 100%		

3. Hazards Overview

Primary Route Of Entry: Skin 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:

Product Code: 5707

Product Description: Potassium Extracting Solution

4. First Aid Measures

Eye Contact: Flush thoroughly with water.

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

Ingestion: Drink 1 - 2 glasses of water. If symptoms of stomach distress appear, consult physician.

Inhalation: N/A

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

6. Accidental Release Measures

Mop up and flush down drain with water.

7. Handling & Storage

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

8. Exposure Controls/Personal Protection

Ventilation

Normal

Protection When Handling

Eye Protection Gloves

Work/Hygenic Practices: Avoid direct contact with eyes or skin. (May be irritating.) Wash after handling.

9. Physical & Chemical Properties

Appearance: Clear Colorless Liquid

Solubility In Water: Soluble

Odor: Vinegar

pH: 5

Vapor Density: Unknown

Vapor Pressure: Unknown

Boiling Point: Unknown

Melting Point: N/A

10. Stability & Reactivity

Stable: Yes

Conditions To Avoid: N/A

Incompatibility (Materials To Avoid): N/A

Hazardous Decomposition Products: CO_x

11. Toxicological Information

Non-toxic

Target Organs: N/A

12. Ecological Information

Information Not Yet Available

13. Disposal Considerations

Pour down drain with excess water. 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	64-19-7 Acetic Acid	Yes	Yes	Yes	No	Yes	Yes
Yes	127-09-3 Sodium Acetate, 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			
64-19-7 Acetic Acid	No	No	No	No	5000	No	No
127-09-3 Sodium Acetate, anhydrous	No	No	No	No	No	No	No
7732-18-5 Distilled Water	No	No	No	No	No	No	No

Product Code: 5707

Product Description: Potassium Extracting Solution

--- SARA 311/312 ---

----- Australia -----

Hazard Categories

**Hazchem
Code**

**Poison
Schedule**

**This MSDS Is
WHMIS Compliant**

Ingredient

Acute

Chronic

Fire

Pressure

Reactivity

64-19-7
Acetic Acid

Yes

Yes

Yes No

Yes

2P

S6

127-09-3
Sodium Acetate, anhydrous

Yes

No

No No

No

None Allocated

None Allocated

7732-18-5
Distilled Water

No

No

No No

No

None Allocated

None Allocated

**product
5707
as a whole**

Yes

No

No No

No

None Allocated

None Allocated

Yes

16. Other Information

Prepared By: IP, Regulatory Affairs Department

Revised: 9/20/2006



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: 5708

Product Description: Potassium Indicator Tablet

Manufactured By: LaMotte Company
802 Washington Avenue
Chestertown, MD 21620

2. Composition/Information On Ingredients

Hazard	CAS#/Name	%	PEL	TLV
Yes	143-66-8 Sodium Tetraphenyl Boron	<1	N/E	N/E
Yes	7647-14-5 Sodium Chloride	70	N/E	N/E
	N/A Lactose	28		
Yes	115-39-9 Bromphenol Blue	<0.1	N/E	N/E
Yes	557-04-0 Magnesium Stearate	<1	15 mg/cubic m, total dust	10 mg/cubic m, tot dust stearates

3. Hazards Overview

Primary Route Of Entry: Ingestion

Ingestion may cause GI irritation.

HMIS Hazard

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

Health: 0 Flammability: 0 Reactivity: 0

Carcinogenicity: None:

Other Health Related Comments:

Non toxic, non-hazardous

4. First Aid Measures

Eye Contact: Flush thoroughly with water.

Skin Contact: Flush thoroughly with water.

Ingestion: Drink 1 - 2 glasses of water. If several tablets have been swallowed consult physician. (Tablets contain mainly salt--sodium chloride).

Inhalation: N/A

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

6. Accidental Release Measures

Sweep up, dissolve in water. Flush down drain with excess water.

Product Code: 5708

Product Description: Potassium Indicator Tablet

7. Handling & Storage

Store in cool, dry, place.

8. Exposure Controls/Personal Protection

Ventilation

Normal

Protection When Handling

N/A

Work/Hygenic Practices: Wash after handling.

9. Physical & Chemical Properties

Appearance: Small Blue Tablet

Solubility In Water: Soluble

Odor: None

pH: 6 (1 tablet in 10mL water)

Vapor Density: N/A

Vapor Pressure: N/A

Boiling Point: N/A

Melting Point: Unknown

10. Stability & Reactivity

Stable: Yes

Conditions To Avoid: Moisture

Incompatibility (Materials To Avoid): N/A

Hazardous Decomposition Products: N/A

Product Code: 5708

Product Description: Potassium Indicator Tablet

11. Toxicological Information

non-toxic

Target Organs: N/A

12. Ecological Information

Information Not Yet Available

13. Disposal Considerations

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

14. Transportation Information

Not Regulated For Transport

15. Regulatory Information

		<u>Chemical Inventory Status</u>					
Hazard	Ingredient	USA TSCA	Europe EC	--- Canada --- DSL NDSL		Australia	Japan
Yes	143-66-8 Sodium Tetraphenylborate	Yes	Yes	Yes	No	Yes	Yes
Yes	7647-14-5 Sodium Chloride	Yes	Yes	Yes	No	Yes	Yes
Yes	115-39-9 Bromphenol Blue, sulfone form	Yes	Yes	Yes	No	Yes	Yes
Yes	557-04-0 Magnesium Stearate	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			
143-66-8 Sodium Tetrphenylborate	No	No	No	No	No	No	No
7647-14-5 Sodium Chloride	No	No	No	No	No	No	No
115-39-9 Bromphenol Blue, sulfone form	No	No	No	No	No	No	No
557-04-0 Magnesium Stearate	No	No	No	No	No	No	No

Product Code: 5708

Product Description: Potassium Indicator Tablet

--- SARA 311/312 ---

----- Australia -----

Hazard Categories

**Hazchem
Code**

**Poison
Schedule**

**This MSDS Is
WHMIS Compliant**

Ingredient **Acute** **Chronic** **Fire** **Pressure** **Reactivity**

143-66-8 Yes No No No No None Allocated None Allocated
Sodium Tetrphenylborate

7647-14-5 Yes No No No No None Allocated None Allocated
Sodium Chloride

115-39-9 Yes No No No No None Allocated None Allocated
Bromphenol Blue, sulfone form

557-04-0 No No Yes No No None Allocated None Allocated
Magnesium Stearate

product No No No No No None Allocated None Allocated Yes
5708
as a whole

16. Other Information

Prepared By: IP, Regulatory Affairs Department

Revised: 9/20/2006



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: 5709

Product Description: Potassium Test Solution

Manufactured By: LaMotte Company
802 Washington Avenue
Chestertown, MD 21620

2. Composition/Information On Ingredients

Hazard	CAS#/Name	%	PEL	TLV
	N/A Hyamine 3500 (disinfectant liquid), which contains:	0.12		
Yes	68424-85-1 N-Alkyl (C12-16)-N,N-dimethyl-N-benzylammonium chloride	<0.1	N/E	N/E
Yes	64-17-5 Ethanol	<0.1	1900 mg/cubic m	1000 ppm
No	7732-18-5 Water	to 100%		

3. Hazards Overview

Primary Route Of Entry:

HMIS Hazard

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

Health: 0 Flammability: 0 Reactivity: 0

Carcinogenicity: None:

Other Health Related Comments:

Non-toxic

Product Code: 5709

Product Description: Potassium Test Solution

4. First Aid Measures

Eye Contact: Flush thoroughly with water.

Skin Contact: Flush thoroughly with water.

Ingestion: Drink plenty of water. Consult physician if large amounts have been swallowed.

Inhalation: N/A

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

6. Accidental Release Measures

Mop up and wash down drain with excess water.

7. Handling & Storage

Store in cool, dry, storage area.

8. Exposure Controls/Personal Protection

Ventilation

Normal

Protection When Handling

Gloves

Work/Hygenic Practices: Avoid repeated contact with skin. Hyamine 3500-50% is an EPA registered pesticide, No. 6836-94.

9. Physical & Chemical Properties

Appearance:	Clear Colorless Liquid	Vapor Density:	<1 (Air=1)
Solubility In Water:	Soluble	Vapor Pressure:	ca. 17mm Hg @ 20 deg C
Odor:	None	Boiling Point:	ca. 100 deg C
pH:	5	Melting Point:	ca. 0 deg C

10. Stability & Reactivity

Stable:	Yes
Conditions To Avoid:	N/A
Incompatibility (Materials To Avoid):	N/A
Hazardous Decomposition Products:	N/A

11. Toxicological Information

For Hyamine 3500-50%: Oral rat LD50: 413 mg/kg. Dilute product (0.1% solution in water) is non-toxic, non-hazardous.

Target Organs: N/A

Product Code: 5709

Product Description: Potassium Test Solution

12. Ecological Information

Information Not Yet Available

13. Disposal Considerations

Pour down drain with excess water. 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	68424-85-1 Hyamine 3500, 50% Soln. (disinfectant)	Yes	Yes	Yes	No	Yes	Yes
Yes	64-17-5 Ethanol	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			
68424-85-1 Hyamine 3500, 50% Soln. (disinfectant)	No	No	No	No	No	No	No
64-17-5 Ethanol	No	No	No	No	No	No	No
7732-18-5 Distilled Water	No	No	No	No	No	No	No

Product Code: 5709

Product Description: Potassium Test Solution

--- SARA 311/312 ---

----- Australia -----

Hazard Categories

**Hazchem
Code**

**Poison
Schedule**

**This MSDS Is
WHMIS Compliant**

Ingredient **Acute** **Chronic** **Fire** **Pressure** **Reactivity**

68424-85-1 Hyamine 3500, 50% Soln. (disinfectant)	Yes	No	Yes	No	No	?	?	
64-17-5 Ethanol	Yes	Yes	Yes	No	No	None Allocated	None Allocated	
7732-18-5 Distilled Water	No	No	No	No	No	None Allocated	None Allocated	
product 5709 as a whole	No	No	No	No	No	None Allocated	None Allocated	Yes

16. Other Information

Prepared By: IP, Regulatory Affairs Department

Revised: 12/29/2005



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: 4004

Product Description: Sodium Hydroxide, 1.0 N

Manufactured By: LaMotte Company

802 Washington Avenue

Chestertown, MD 21620

2. Composition/Information On Ingredients

Hazard	CAS#/Name	%	PEL	TLV
Yes	1310-73-2 Sodium Hydroxide	4	C 2 mg/cubic m	C 2 mg/cubic m
No	7732-18-5 Water	to 100%		

3. Hazards Overview

Primary Route Of Entry: Skin Ingestion

Warning! Corrosive. Can cause severe irritation or burns to all body tissue. Harmful if swallowed.

HMIS Hazard

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

Health: 2 Flammability: 0 Reactivity: 1

Carcinogenicity: None:

Other Health Related Comments:

Product Code: 4004

Product Description: Sodium Hydroxide, 1.0 N

4. First Aid Measures

Eye Contact: Immediately flush with water for 15 minutes. Consult a physician.

Skin Contact: Immediately flush with water for 15 minutes. Remove affected clothing and rinse skin thoroughly.

Ingestion: Do not induce vomiting. Rinse out mouth. Drink plenty of water. Call a doctor immediately.

Inhalation: N/A

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

6. Accidental Release Measures

Wear gloves and eye protection. Carefully neutralize with vinegar or other dilute acid (6 M HCl). Mop up and flush to drain with excess water.

7. Handling & Storage

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

8. Exposure Controls/Personal Protection

Ventilation

Normal

Protection When Handling

Eye Protection Gloves Lab Coat

Work/Hygenic Practices: Avoid contact with eyes, skin and clothing. Wash after handling.

9. Physical & Chemical Properties

Appearance: Clear Colorless Liquid

Solubility In Water: Soluble

Odor: None

pH: 14

Vapor Density: <1 (Air=1)

Vapor Pressure: <17 mm Hg @ 20 deg C

Boiling Point: 102 deg C (5% soln)

Melting Point: (-) 4 deg C (5% soln)

10. Stability & Reactivity

Stable: Yes

Conditions To Avoid: N/A

Incompatibility (Materials To Avoid): Strong acids, metals

Hazardous Decomposition Products: N/A

11. Toxicological Information

Sodium hydroxide investigated as a tumorigen, mutagen.

Target Organs: Corrosive to all body parts Skin

Product Code: 4004

Product Description: Sodium Hydroxide, 1.0 N

12. Ecological Information

Information Not Yet Available

13. Disposal Considerations

Neutralize and flush down drain with excess water. Dispose according to federal, state and local regulations.

14. Transportation Information

Proper Shipping Name:

DOT: SODIUM HYDROXIDE SOLUTION

IATA: SODIUM HYDROXIDE SOLUTION

Hazard Class/Div:

DOT: 8

IATA: 8

UN: 1824

Packing Group: II

15. Regulatory Information

Chemical Inventory Status

Hazard	Ingredient	USA	Europe	--- Canada ---		Australia	Japan
		TSCA	EC	DSL	NDSL		
Yes	1310-73-2 Sodium Hydroxide	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			
1310-73-2 Sodium Hydroxide	No	No	No	No	1000	No	No
7732-18-5 Distilled Water	No	No	No	No	No	No	No

Product Code: 4004

Product Description: Sodium Hydroxide, 1.0 N

--- SARA 311/312 ---

----- Australia -----

Hazard Categories

**Hazchem
Code**

**Poison
Schedule**

**This MSDS Is
WHMIS Compliant**

Ingredient **Acute** **Chronic** **Fire** **Pressure** **Reactivity**

1310-73-2 Yes No No No Yes
Sodium Hydroxide

7732-18-5 No No No No No None Allocated None Allocated
Distilled Water

product Yes No No No No 2R S5 Yes
4004
as a whole

16. Other Information

Prepared By: IP, Regulatory Affairs Department

Revised: 6/12/2006



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: 5147

Product Description: Nitrate Reagent #2

Manufactured By: LaMotte Company

802 Washington Avenue

Chestertown, MD 21620

2. Composition/Information On Ingredients

Hazard	CAS#/Name	%	PEL	TLV
Yes	10034-96-5 Manganous Sulfate Monohydrate	1.5	C 5 mg/cubic m (comp. as Mn)	0.2 mg/cubic m (inorg comp as Mn)
Yes	7440-66-6 Zinc Dust	6	N/E	10 mg/cubic m, ZnO fume
Yes	7727-43-7 Barium Sulfate	63	10 mg/cubic m total dust	10 mg/cubic m total dust
Yes	63-74-1 Sulfanilamide	<1	N/E	N/E
Yes	1465-25-4 N-1-Naphthyl-ethylenediamine dihydrochloride	<1	N/E	N/E
Yes	57-50-1 Sugar	28	5 mg/cubic m (respirable)	10 mg/cubic m (total dust)

3. Hazards Overview

Primary Route Of Entry: Ingestion Inhalation Skin

Harmful by dust inhalation and if swallowed. May cause skin irritation.

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:

Manganese sulfate and sulfanilamide are possible mutagens, which may cause heritable genetic damage.

4. First Aid Measures

Eye Contact: Flush thoroughly with water.

Skin Contact: Wash with soap and water.

Ingestion: Drink water. Consult a physician.

Inhalation: Remove to fresh air.

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

6. Accidental Release Measures

Small quantity: Sweep up, dissolve in water and flush down drain. Large quantity: Sweep up. Place in clean, dry, closed container. Send to approved landfill or to hazardous waste disposal.

Product Code: 5147

Product Description: Nitrate Reagent #2

7. Handling & Storage

Store tightly closed in cool, dry place away from heat, moisture, and strong acids.

8. Exposure Controls/Personal Protection

Ventilation

Mechanical

Protection When Handling

Gloves Eye Protection Lab Coat

Work/Hygenic Practices: Avoid contact with skin and clothing and inhalation of dust. Wash after handling.

9. Physical & Chemical Properties

Appearance: Off white Powder

Solubility In Water: Partial

Odor: None

pH: 6 (0.1g/10mL water)

Vapor Density: N/A

Vapor Pressure: N/A

Boiling Point: N/A

Melting Point: Unknown

10. Stability & Reactivity

Stable: Yes

Conditions To Avoid: Heat, moisture

Incompatibility (Materials To Avoid): Strong acids

Hazardous Decomposition Products: N/A

11. Toxicological Information

Manganese sulfate monohydrate--Oral rat LD50: 2150 mg/kg. Sulfanilamide--Oral rat LD50: 3900mg/kg . Both chemicals have been investigated as possible tumorigens, mutagens, or reproductive effectors.

Target Organs: Blood Central Nervous System Kidney Lung Skin

12. Ecological Information

Information Not Yet Available

13. Disposal Considerations

Dispose according to federal, state and local regulations.

14. Transportation Information

Not Regulated For Transport

15. Regulatory Information**Chemical Inventory Status**

Hazard	Ingredient	USA		--- Canada ---		Australia	Japan
		TSCA	EC	DSL	NDSL		
Yes	7785-87-7 Manganese Sulfate, anhydrous	Yes	Yes	Yes	No	Yes	Yes
Yes	7440-66-6 Zinc Dust	Yes	Yes	Yes	No	Yes	No
Yes	7727-43-7 Barium Sulfate	Yes	Yes	Yes	No	Yes	Yes
Yes	63-74-1 Sulfanilamide	Yes	Yes	Yes	No	Yes	Yes
Yes	1465-25-4 N-1-(Naphthyl) ethylenediamine dihydrochloride	Yes	Yes	Yes	No	Yes	No
Yes	57-50-1 Sucrose	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			
7785-87-7 Manganese Sulfate, anhydrous	No	No	No	Manganese cmpnd	1	No	No
7440-66-6 Zinc Dust	No	No	Yes	No	1000	No	No
7727-43-7 Barium Sulfate	No	No	No	No	No	No	No
63-74-1 Sulfanilamide	No	No	No	No	No	No	No
1465-25-4 N-1-(Naphthyl) ethylenediamine dihydrochloride	No	No	No	No	No	No	No
57-50-1 Sucrose	No	No	No	No	No	No	No

Product Code: 5147

Product Description: Nitrate Reagent #2

--- SARA 311/312 ---

----- Australia -----

Hazard Categories

**Hazchem
Code**

**Poison
Schedule**

**This MSDS Is
WHMIS Compliant**

Ingredient	Acute	Chronic	Fire	Pressure	Reactivity	Hazchem Code	Poison Schedule	This MSDS Is WHMIS Compliant
7785-87-7 Manganese Sulfate, anhydrous	Yes	Yes	No	No	No	None Allocated	None Allocated	
7440-66-6 Zinc Dust	Yes	No	Yes	No	Yes	4Y	S6	
7727-43-7 Barium Sulfate	Yes	No	No	No	No	None Allocated	None Allocated	
63-74-1 Sulfanilamide	Yes	No	No	No	No	None Allocated	None Allocated	
1465-25-4 N-1-(Naphthyl) ethylenediamine dihydrochloride	Yes	No	No	No	No	None Allocated	None Allocated	
57-50-1 Sucrose	No	No	Yes	No	No	None Allocated	None Allocated	
product 5147 as a whole	Yes	Yes	Yes	No	No	None Allocated	None Allocated	Yes

16. Other Information

Prepared By: IP, Regulatory Affairs Department

Revised: 7/28/2006