



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:	6537	Manufactured By:	LaMotte Company
Product Description:	Ammonium Hydroxide, Conc.		802 Washington Avenue Chestertown, MD 21620

2. Composition/Information on Ingredients

Hazardous	Name	CAS #	%	OSHA PEL	ACGIH TLV
Yes	Ammonium Hydroxide (28-30% ammonia, NH3)	1336-21-6	28-30	35 mg/cubic m as NH3	25 mg/cubic m as NH3
No	Water to 100%	7732-18-5	>70		

3. Hazards Overview

Primary Route of Entry: Inhalation Skin

POISON! DANGER! CORROSIVE. May be fatal if swallowed or inhaled. Mist and vapor cause burns to every area of contact. Vapor and liquid are corrosive to eyes, respiratory system, and skin.

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

Health: 3 Flammability: 1 Reactivity: 2

Carcinogenicity: None

Other Health Related Comments:

Ammonium hydroxide investigated as a mutagen; ammonia vapor as both a tumorigen and mutagen.

4. First Aid Measures

Eye Contact: Immediately flush with water for 15 minutes. Call a doctor.

Skin Contact: Immediately flush skin with lots of water for 15 minutes while removing contaminated clothing.

Ingestion: Do not induce vomiting. Drink lots of water. Follow with dilute vinegar or fruit juice. Call a doctor immediately

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

Product Code: 6537

Product Description: Ammonium Hydroxide, Conc.

5. Fire Fighting Measures

Flash Point: N/A **LEL:** 16% **UEL:** 25%

Fire Rating

Extinguishing Media: Water spray

Special Fire Fighting Procedures: Wear protective equipment and self-contained breathing apparatus.

Hazardous Combustion and/or Decomposition Products: Ammonia, NO_x

Unusual Fire & Explosion Hazard: Gives off flammable vapors which may form explosive mixture with air. Flammable vapors may accumulate in confined spaces. Vapors are sensitive to static charge. Closed containers exposed to heat may explode.

6. Accidental Release Measures

Ventilate area. Wear respirator with ammonia cartridge; Neoprene or Nitrile gloves. Dilute spill with water & neutralize with dilute hydrochloric acid. Mop up and flush to drain with excess water.

7. Handling & Storage

Store out of direct sunlight. Store tightly closed in cool (below 25 deg C), well-ventilated area away from such incompatible materials as strong acids, bleaches.

8. Exposure Controls/Personal Protection

Ventilation

A system of local and/or general exhaust is recommended.

Protection When Handling

Gloves Eye Protection Lab Coat

Work/Hygienic Practices: Use only with good ventilation (fume hood). Avoid contact with eyes, skin, clothing. Avoid inhalation of vapor.

9. Physical & Chemical Properties

Appearance:	Colorless Clear Liquid	Boiling Point:	ca. 36 deg C
		Melting Point:	(-)72 deg C
		pH:	14
Odor:	Pungent, ammonia	Vapor Density:	0.6(Air=1)
Solubility in Water:	Soluble	Vapor Pressure:	115 mm @20deg C

10. Stability & Reactivity

Stable: Yes

Conditions to Avoid: Heat, light, sources of ignition.

Materials to Avoid: Acids, metals, bleaches, silver nitrate.

Hazardous Decomposition Products: Ammonia, NO_x

Product Code: 6537

Product Description: Ammonium Hydroxide, Conc.

11. Toxicological Information

Oral rat LD50: 350 mg/kg for ammonium hydroxide. Eye, rabbit, standard Draize, 250 ug. (Severe). Investigated as a mutagen.

Target Organs: Lungs, Corrosive to all body parts

12. Ecological Information

Environmental Fate:

This material is not expected to significantly bioaccumulate.

13. Disposal Considerations

Carefully neutralize with 6M Hydrochloric Acid. Then flush down drain with excess water. Dispose according to federal, state and local regulations.

14. Transport Information

Proper Shipping Name: AMMONIA SOLUTIONS (10-35% Ammonia)

Hazard Class/Div: 8

UN 2672

Packing Group: III

15. Regulatory Information

Chemical Inventory Status

Ingredient	USA	Europe	---Canada---		Australia	Japan
	TSCA	EC	DSL	NDSL		
Ammonium Hydroxide (28-30% ammonia, NH3)	Yes	Yes	Yes	No	Yes	Yes

Water to 100%

Federal, State, & International Regulations

Ingredient	---SARA 302---		----- SARA 313 -----			RCRA 261.33	TSCA 8(D)
	RQ	TPQ	Listed	Chemical Category	CERCLA		
Ammonium Hydroxide (28-30% ammonia, NH3)	No	No	No	No	1000	No	No

Water to 100%

Ingredient	----- SARA 311/312 -----			----- Australia -----		This MSDS is WHMIS Compliant
	Hazard Categories			Hazchem Code	Poison Schedule	
Ammonium Hydroxide (28-30% ammonia, NH3)	Acute: Yes	Chronic: Yes	Fire: No	2P	S6	
	Pressure: No	Reactivity: No	(Mixture/Liquid)			

Water to 100%

For product #6537 liquid mixture, taken as a whole Acute: Yes Chronic: Yes Fire: No Pressure: No Reactivity: No 2P S6 YES

Product Code: 6537

Product Description: Ammonium Hydroxide, Conc.

16. Other Information

Prepared By: IP

Revised:6/20/2005



MSDS

Material Safety Data Sheet

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)

1. Product Identification

Product Code:

6346

Product Description:

Silver Nitrate, 0.0141N

Manufactured By:

LaMotte Company

802 Washington Avenue

Chestertown, MD 21620

2. Composition/Information on Ingredients

Hazardous	Name	CAS #	%	OSHA PEL	ACGIH TLV
Yes	Silver Nitrate	7761-88-8	0.2	0.01 mg/cubic m as Ag	0.01 mg/cubic m as Ag
No	Water to 100%	7732-18-5			

3. Hazards Overview

Primary Route of Entry: Ingestion Skin

May stain 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:

4. First Aid Measures

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

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

Ingestion: Rinse out mouth. Drink water. Consult a physician.

Inhalation: N/A

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: N/A

Unusual Fire & Explosion Hazard: N/A

6. Accidental Release Measures

Wear gloves to mop up and collect spilled liquid. Do not flush larger quantities of silver nitrate to sewer or drain. Dispose of as a hazardous waste, following federal, state and local regulations.

Product Code: 6346

Product Description: Silver Nitrate, 0.0141N

7. Handling & Storage

Keep in a tightly closed container, stored in a cool, ventilated area. Protect from light.

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. Will stain.

9. Physical & Chemical Properties

Appearance:	Clear Colorless Liquid	Boiling Point:	ca. 100 deg C
		Melting Point:	N/A
		pH:	5
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:	Heat, light
Materials to Avoid:	Silver nitrate is incompatible with ammonia, alkalis, halides, and metal salts.

Hazardous Decomposition Products: N/A

11. Toxicological Information

Oral rat LD50: 1173 mg/kg. Unknown route, man LDLo: 29 mg/kg for solid silver nitrate (toxic).
Investigated as a tumorigen, mutagen, reproductive effector.

Target Organs: skin

12. Ecological Information

Information not Available

13. Disposal Considerations

Small quantity: Flush down drain with excess water. Large quantity: Collect and dispose of as hazardous waste, according to federal, state and local regulations.

14. Transport Information

Not regulated for transport

Product Code: 6346

Product Description: Silver Nitrate, 0.0141N

15. Regulatory Information

Chemical Inventory Status

Ingredient	USA TSCA	Europe EC	---Canada--- DSL NDSL		Australia	Japan
Silver Nitrate	Yes	Yes	Yes	No	Yes	Yes
Water to 100%	Yes	Yes	Yes	No	Yes	Yes

Federal, State, & International Regulations

Ingredient	---SARA 302--- RQ TPQ		----- SARA 313 ----- Listed Chemical Category			CERCLA	RCRA 261.33	TSCA 8(D)
Silver Nitrate	No	No	No	Silver compd	1	No	No	
Water to 100%	No	No	No	No	No	No	No	

Ingredient	----- SARA 311/312 ----- Hazard Categories			----- Australia ----- Hazchem Code Poison Schedule		This MSDS is WHMIS Compliant
Silver Nitrate	Acute: Yes	Chronic: Yes	Fire: No	2X	S6	
Water to 100%	Pressure: No	Reactivity: Yes	(Pure/Solid)			
For #6346 liquid mixture, as a whole	Acute: Yes	Chronic: Yes	Fire: No	2X	None Allocated	Yes
	Pressure: No	Reactivity: No	(liquid/mixture)			

16. Other Information

Prepared By: IP

Revised: 7/06/2005



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: 6251

Product Description: Hydrochloric Acid, 2.5N

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	9	C 5 ppm	C 2 ppm
No	7732-18-5 Water	to 100%		

3. Hazards Overview

Primary Route Of Entry: Skin Ingestion Inhalation

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: 6251

Product Description: Hydrochloric Acid, 2.5N

4. First Aid Measures

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

Skin Contact: Flush with water for 15 minutes while removing affected clothing. Wash skin with soap and water.

Ingestion: Rinse out mouth. Drink plenty of water. Consult physician immediately.

Inhalation: Remove to fresh air. If breathing is difficult, give oxygen.

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: Firefighters wear self-contained breathing apparatus

Unusual Fire & Explosion Hazard: Contact with metals may produce flammable hydrogen gas.

6. Accidental Release Measures

Wear acid-resistant gloves and eye protection. Cover spill with sodium bicarbonate. Scoop up neutralized slurry and wash down drain with excess water.

7. Handling & Storage

Store in cool, dry, storage area away from such incompatible materials as strong bases, ammonia, metals, sulfides and cyanides.

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. Avoid inhalation of vapor. Wash after handling.

9. Physical & Chemical Properties

Appearance: Clear Colorless Liquid

Solubility In Water: Soluble

Odor: Slight

pH: <1

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 alkalies, metals

Hazardous Decomposition Products: Hydrogen Chloride gas

11. Toxicological Information

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

Target Organs: Corrosive to all body parts Skin

Product Code: 6251

Product Description: Hydrochloric Acid, 2.5N

12. Ecological Information

Information Not Yet Available

13. Disposal Considerations

Add slowly to a solution of sodium carbonate and calcium hydroxide. Pour this 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: II

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

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: 6251

Product Description: Hydrochloric Acid, 2.5N

--- 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 2R None Allocated Yes
6251
as a whole

16. Other Information

Prepared By: IP, Regulatory Affairs Department

Revised: 4/21/2006



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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:

6254

Product Description:

Dimethylglyoxime, 1%

Manufactured By:

LaMotte Company

802 Washington Avenue

Chestertown, MD 21620

2. Composition/Information on Ingredients

Hazardous	Name	CAS #	%	OSHA PEL	ACGIH TLV
Yes	Ethyl Alcohol	64-17-5	>90	1900 mg/cubic m	1000 ppm
Yes	Methyl Alcohol	67-56-1	>5	200 ppm	200 ppm
Yes	Dimethylglyoxime	95-45-4	1	N/E	N/E
No	Water	7732-18-5	<5		

3. Hazards Overview

Primary Route of Entry: Ingestion Inhalation Skin

Danger! Poison! Vapor and liquid harmful. Inhalation can cause headache, dizziness, nausea. May be irritating to eyes and skin. Harmful if swallowed: Ingestion may be fatal or cause blindness. Cannot be made nonpoisonous.

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

Health: 2 Flammability: 3 Reactivity: 1

Carcinogenicity: None

Other Health Related Comments: See Section 11.

4. First Aid Measures

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

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

Ingestion: Do not induce vomiting. Drink plenty of water. Call a physician immediately.

Inhalation: Remove to fresh air.

5. Fire Fighting Measures

Flash Point: ca. 20 deg C-closedcup **LEL:** 3.3% **UEL:** 19%

Fire Rating

Extinguishing Media: Dry chemical, CO₂, or water spray

Special Fire Fighting Procedures: N/A

Hazardous Combustion and/or Decomposition Products: CO_x

Unusual Fire & Explosion Hazard: Vapors may travel distance to ignition source and flash back.

Product Code: 6254

Product Description: Dimethylglyoxime, 1%

6. Accidental Release Measures

Eliminate sources of ignition. Absorb on paper or spill pad. Allow to evaporate on iron pan in fume hood.

7. Handling & Storage

Store in a cool, dry, well-ventilated location, away from any area where the fire hazard may be acute. Do not use near hot surfaces, sparks, flame, static electricity or other sources of ignition.

8. Exposure Controls/Personal Protection

Ventilation

A system of local and/or general exhaust is recommended.

Protection When Handling

Gloves Eye Protection Lab Coat

Work/Hygienic Practices: Use with adequate ventilation and avoid contact with skin.

9. Physical & Chemical Properties

Appearance:	Clear Colorless Liquid	Boiling Point:	78 deg C
		Melting Point:	N/A
		pH:	N/A
Odor:	Alcohol	Vapor Density:	1.6(Air=1)
Solubility in Water:	Soluble	Vapor Pressure:	40 mm at 19 deg C

10. Stability & Reactivity

Stable:	Yes
Conditions to Avoid:	Heat, sources of ignition
Materials to Avoid:	Strong oxidizers, nitric or sulfuric acid

Hazardous Decomposition Products: COx or formaldehyde when heated to decomposition.

11. Toxicological Information

Oral human LDLo: 1400 mg/kg ethanol

Oral Human LDLo: 143 mg/kg methanol. Toxic. Methanol affects Central Nervous System, particularly the optic nerve, and the Liver

Oral rat LDLo: 250 mg/kg Dimethylglyoxime; Investigated as a mutagen.

Target Organs: Central Nervous System, Liver

12. Ecological Information

Information not Available

13. Disposal Considerations

Small quantity: Flush down drain with excess water. Large quantity: Atomize into an incinerator. Dispose according to federal, state and local regulations.

Product Code: 6254

Product Description: Dimethylglyoxime, 1%

14. Transport Information

Domestic:

Proper Shipping Name: ALCOHOLS, N.O.S. (ETHANOL DENATURED WITH 5% METHANOL)

Hazard Class/Div: 3

UN1987

Packing Group: II

International:

Proper Shipping Name: ALCOHOLS, N.O.S. (ETHANOL DENATURED WITH 5% METHANOL)

Hazard Class/Div: 3, 6.1

UN1987

Packing Group: II

15. Regulatory Information

Chemical Inventory Status

Ingredient	USA	Europe	---Canada---		Australia	Japan
	TSCA	EC	DSL	NDSL		
Ethyl Alcohol	Yes	Yes	Yes	No	Yes	Yes
Methyl Alcohol	Yes	Yes	Yes	No	Yes	Yes
Dimethylglyoxime Water	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		
Ethyl Alcohol	No	No	No	No	No	D001	No
Methyl Alcohol	No	No	Yes	No	5000	U154	No
Dimethylglyoxime Water	No	No	No	No	No	No	No

Ingredient	----- SARA 311/312 -----			----- Australia -----		This MSDS is WHMIS Compliant
	Hazard Categories			Hazchem Code	Poison Schedule	
Ethyl Alcohol	Acute: Yes Pressure: No	Chronic: Yes Reactivity: No (Pure/Liquid)	Fire: Yes	None allocated	None allocated	
Methyl Alcohol	Acute: Yes Pressure: No	Chronic: Yes Reactivity: No (Pure/Liquid)	Fire: Yes	2PE	S6	
Dimethylglyoxime Water	Acute: Yes Pressure: No	Chronic: No Reactivity: No (Pure/Solid)	Fire: No	None Allocated	None Allocated	
For #6254 liquid mixture, as a whole	Acute: Yes Pressure: No	Chronic: Yes Reactivity: No	Fire: Yes	2PE	S6	Yes

Product Code: 6254

Product Description: Dimethylglyoxime, 1%

16. Other Information

Do not use near heat or flame.

Prepared By: IP

Revised: 6/15/2005



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: 4070

Product Description: Chloride Reagent B

Manufactured By: LaMotte Company

802 Washington Avenue

Chestertown, MD 21620

2. Composition/Information On Ingredients

Hazard	CAS#/Name	%	PEL	TLV
Yes	7761-88-8 Silver Nitrate	0.24	0.01 mg/cubic m as Ag	0.01 mg/cubic m as Ag
No	7732-18-5 Water	to 100%		

3. Hazards Overview

Primary Route Of Entry: Ingestion Skin

May stain 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: 4070

Product Description: Chloride Reagent B

4. First Aid Measures

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

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

Ingestion: Rinse mouth. 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

Wear gloves and eye protection. Mop up carefully. Collect liquid and containerize for disposal as hazardous waste.

7. Handling & Storage

Store out of sunlight in cool, dry storage area--away from incompatible materials.

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

Solubility In Water: Soluble

Odor: None

pH: 5

Vapor Density: <1 (Air=1)

Vapor Pressure: <17 mm Hg @ 20 deg C

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: NO_x

11. Toxicological Information

unknown route, man LD Lo: 29 mg/kg for solid Silver Nitrate

Target Organs: Skin

Product Code: 4070

Product Description: Chloride Reagent B

12. Ecological Information

Information Not Yet Available

13. Disposal Considerations

Small quantity: Flush down drain with excess water. Large quantity: Dispose of as hazardous waste, 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	7761-88-8 Silver Nitrate	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			
7761-88-8 Silver Nitrate	No	No	No	Silver comp	1	No	No
7732-18-5 Distilled Water	No	No	No	No	No	No	No

Product Code: 4070

Product Description: Chloride Reagent B

--- SARA 311/312 ---

----- Australia -----

Hazard Categories

**Hazchem
Code**

**Poison
Schedule**

**This MSDS Is
WHMIS Compliant**

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

7761-88-8 Yes Yes No No Yes
Silver Nitrate

7732-18-5 No No No No No
Distilled Water

2X S6

None Allocated None Allocated

product Yes Yes No No No None Allocated None Allocated Yes
4070
as a whole

16. Other Information

Prepared By: IP, Regulatory Affairs Department

Revised: 6/12/2006



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

MSDS
Material Safety Data Sheet

1. Product Identification

Product Code:	6566	Manufactured By:	LaMotte Company
Product Description:	Ammonium Persulfate		802 Washington Avenue Chestertown, MD 21620

2. Composition/Information on Ingredients

Hazardous	Name	CAS #	%	OSHA PEL	ACGIH TLV
Yes	Ammonium Persulfate	7727-54-0	98-100	N/E	2

3. Hazards Overview

Primary Route of Entry: Ingestion Inhalation Skin

Danger! Strong oxidizer. Contact with other material may cause fire. Harmful if swallowed. Corrosive. Will irritate eyes, nose and skin. Direct contact may cause burns to skin and eyes.

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

Health: 2 Flammability: 0 Reactivity: 3

Carcinogenicity: None

Other Health Related Comments:

Prolonged exposure to Ammonium Persulfate may cause sensitization, dermatitis.

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 and shoes. Wash skin with soap and water.

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

Inhalation: Move to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult give oxygen.

Product Code: 6566

Product Description: Ammonium Persulfate

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: ammonia, SO₂, NO₂, sulfuric acid

Unusual Fire & Explosion Hazard: Ignites if moderately heated. Contact with other combustibles may cause fire
Mixing a solution of ammonium persulfate with powdered iron or aluminum may result in explosion.

6. Accidental Release Measures

Keep combustibles away from spill. Avoid raising dust. Carefully sweep up spilled material using a non-sparking shovel and dust pan. Place in clean, dry plastic container with lid. Dispose of as hazardous waste. Flush spill area with water.

7. Handling & Storage

Store container tightly closed at temperature less than 20 degrees C, away from combustible and flammable materials.

8. Exposure Controls/Personal Protection

Ventilation

A system of local and/or general exhaust is recommended.

Protection When Handling

Gloves Eye Protection Lab Coat

Work/Hygienic Practices: Avoid contact with skin. Use with adequate ventilation. Avoid breathing dust.

9. Physical & Chemical Properties

Appearance:	White Crystal or powder	Boiling Point:	N/A
		Melting Point:	dec.120 degC
		pH:	4 (0.1g in 10mL water)
Odor:	None	Vapor Density:	N/A
Solubility in Water:	Soluble	Vapor Pressure:	N/A

10. Stability & Reactivity

Stable: No

Conditions to Avoid: Heat, shock, moisture

Materials to Avoid: Strong reducing agents, finely powdered metals, combustible materials.

Hazardous Decomposition Products: ammonia, SO₂, NO₂, sulfuric acid

Product Code: 6566

Product Description: Ammonium Persulfate

11. Toxicological Information

oral rat LD50: 820 mg/kg

Target Organs: Skin Respiratory System Eyes

12. Ecological Information

Information not Available

13. Disposal Considerations

Dispose of as hazardous waste according to federal, state and local regulations.

14. Transport Information

Proper Shipping Name: AMMONIUM PERSULFATE

Hazard Class/Div: 5.1

UN1444

Packing Group: III

15. Regulatory Information

Chemical Inventory Status

Ingredient	USA TSCA	Europe EC	---Canada--- DSL NDSL		Australia	Japan
Ammonium Persulfate	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		
Ammonium Persulfate	No	No	No	No	No	No	No

Ingredient	----- SARA 311/312 ----- Hazard Categories			----- Australia ----- Hazchem Code		Poison Schedule	This MSDS is WHMIS Compliant
Ammonium Persulfate	Acute: Yes	Chronic: Yes	Fire: No	2P		None allocated	Yes
	Pressure: No	Reactivity: Yes					

16. Other Information

Prepared By: IP

Revised: 3/07/2005



MSDS
Material Safety Data Sheet

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)

1. Product Identification

Product Code: 6253
Product Description: Sodium Citrate, 10%
Manufactured By: LaMotte Company
802 Washington Avenue
Chestertown, MD 21620

2. Composition/Information on Ingredients

Hazardous	Name	CAS #	%	OSHA PEL	ACGIH TLV
Yes	Kathon ^R CG/ICP Preservative	N/A	<0.1	N/E	N/E
No	Sodium Citrate Dihydrate	6132-04-3	10	N/E	N/E
No	Water to 100%	7732-18-5	90		

3. Hazards Overview

Primary Route of Entry: Ingestion
Extremely large oral doses may produce gastrointestinal disturbances.

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: See Section 11.

4. First Aid Measures

- Eye Contact:** Flush with water for 15 minutes.
- Skin Contact:** Wash with soap and water.
- Ingestion:** Drink glass of water. Consult physician.
- Inhalation:** N/A

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

Product Code: 6253

Product Description: Sodium Citrate, 10%

6. Accidental Release Measures

Mop up with paper towels.

7. Handling & Storage

No special storage requirements.

8. Exposure Controls/Personal Protection

Ventilation

No special ventilation requirements

Protection When Handling

Eye Protection

Work/Hygienic Practices: N/A

9. Physical & Chemical Properties

Appearance: Clear Colorless Liquid

Boiling Point: > 100 deg C

Melting Point: Unknown

pH: 9

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: N/A

Hazardous Decomposition Products: N/A

11. Toxicological Information

Kathon[®] CG/ICP preservative is corrosive (acidic) and a potential skin sensitizer. However, it is present in product #6253 below de minimis concentration (<0.1%). **Product is non-toxic.**

Target Organs: N/A

12. Ecological Information

Information not Available

13. Disposal Considerations

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

14. Transport Information

Not regulated for transport

Product Code: 6253**Product Description: Sodium Citrate, 10%**

15. Regulatory Information**Chemical Inventory Status**

Ingredient	USA	Europe	---Canada---		Australia	Japan
	TSCA	EC	DSL	NDSL		
Kathon ^R CG/ICP Preservative	No (Exempt)*					
Sodium Citrate, anhydrous (68-04-2) Water to 100%	Yes	Yes	Yes	No	Yes	Yes

*Kathon^R is regulated in the U.S. under Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and is therefore exempt from US TSCA Inventory listing requirements.

Federal, State, & International Regulations

Ingredient	---SARA 302---		----- SARA 313 -----			RCRA	TSCA
	RQ	TPQ	Listed	Chemical Category	CERCLA	261.33	8(D)
Kathon ^R CG/ICP Preservative	No	No	No	No	No	No	No
Sodium Citrate, anhydrous (68-04-2) Water to 100%	No	No	No	No	No	No	No

Ingredient	----- SARA 311/312 -----	----- Australia -----		This MSDS is WHMIS Compliant
	Hazard Categories	Hazchem Code	Poison Schedule	
Kathon ^R CG/ICP Preservative	Acute: Yes Chronic: Yes Fire: No Pressure: No Reactivity: No (Pure/Liquid)			
Sodium Citrate, anhydrous (68-04-2) Water to 100%	Acute: No Chronic: No Fire: No Pressure: No Reactivity: No (Pure/Solid)	None Allocated	None Allocated	
For product #6253 liquid mixture, as a whole	Acute: No Chronic: No Fire: No Pressure: No Reactivity: No	None Allocated	None Allocated	Yes

16. Other Information**Prepared By: IP****Revised: 5/11/2005**