



# 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:** 4032

**Product Description:** Ammonium Chloride Buffer

**Manufactured By:** LaMotte Company

802 Washington Avenue

Chestertown, MD 21620

### 2. Composition/Information On Ingredients

Hazard	CAS#/Name	%	PEL	TLV
Yes	1336-21-6 Ammonium Hydroxide (16% w/w aqueous ammonia)	<8 NH3	50 ppm as NH3	25 ppm as NH3
Yes	12125-02-9 Ammonium Chloride	0.5	10 mg/cubic m	10 mg/cubic m NH4Cl fume
Yes	5470-11-1 Hydroxylamine Hydrochloride	1.2	N/E	N/E
No	7732-18-5 Water	to 100%		

### 3. Hazards Overview

**Primary Route Of Entry:** Ingestion Inhalation Skin

Vapors harmful to mucous membranes. Causes severe burns and may be fatal 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:**

Hydroxylamine HCl is toxic, corrosive, & a possible sensitizer, mutagen, or teratogen.

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#### **4. First Aid Measures**

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

**Skin Contact:** Flush with water for 15 minutes while removing affected clothing. Rinse skin thoroughly.

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

**Inhalation:** Remove to fresh air.

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#### **5. Fire Fighting Measures**

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

**LEL:** 15%

**UEL:** 28% (NH<sub>3</sub>)

**Extinguishing Media:** Water spray

**Special Fire Fighting Procedures:** Firefighters wear SCBA.

**Unusual Fire & Explosion Hazard:** May give off flammable vapors under fire conditions. Closed containers exposed to heat may burst.

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#### **6. Accidental Release Measures**

Do not breathe vapor. Wear NIOSH approved respirator with ammonia vapor cartridge if airborne concentration exceeds TLV.

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#### **7. Handling & Storage**

Store in cool, dry, storage area away from such incompatible materials as acids, metals, bleach.

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## **8. Exposure Controls/Personal Protection**

### **Ventilation**

Mechanical

### **Protection When Handling**

Gloves Eye Protection Lab Coat

**Work/Hygenic Practices:** Use with adequate ventilation and avoid contact with eyes or skin.

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## **9. Physical & Chemical Properties**

**Appearance:** Clear Colorless Liquid

**Solubility In Water:** Soluble

**Odor:** Pungent, ammonia

**pH:** 10

**Vapor Density:** Unknown

**Vapor Pressure:** ammonia: 8.5 atm

**Boiling Point:** Unknown

**Melting Point:** N/A

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## **10. Stability & Reactivity**

**Stable:** Yes

**Conditions To Avoid:** Heat, light

**Incompatibility (Materials To Avoid):** Metals, chlorine, bleaches, acids

**Hazardous Decomposition Products:** Ammonia, NOx

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## **11. Toxicological Information**

orl rat LD50:350 mg/kg, Ammonium Hydroxide; orl mus LD50:408 mg/kg, Hydroxylamine HCl

**Target Organs:** Skin Eyes Lungs

**Pre-Existing Conditions Aggravated By Exposure:** Respiratory conditions

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**12. Ecological Information**

Information Not Yet Available

**13. Disposal Considerations**

Carefully neutralize with dilute hydrochloric acid. 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		--- Canada ---		Australia	Japan
		TSCA	Europe EC	DSL	NDSL		
Yes	1336-21-6 Ammonium Hydroxide	Yes	Yes	Yes	No	Yes	Yes
Yes	12125-02-9 Ammonium Chloride	Yes	Yes	Yes	No	Yes	Yes
Yes	5470-11-1 Hydroxylamine Hydrochloride	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			
1336-21-6 Ammonium Hydroxide	No	No	No	No	1000	No	No
12125-02-9 Ammonium Chloride	No	No	No	No	5000	No	No
5470-11-1 Hydroxylamine Hydrochloride	No	No	No	No	No	No	No
7732-18-5 Distilled Water	No	No	No	No	No	No	No

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--- SARA 311/312 ---

----- Australia -----

**Hazard Categories**

**Hazchem  
Code**

**Poison  
Schedule**

**This MSDS Is  
WHMIS Compliant**

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

1336-21-6 Ammonium Hydroxide	Yes	Yes	No	No	No	2P	S6	
12125-02-9 Ammonium Chloride	Yes	No	No	No	No	None Allocated	None Allocated	
5470-11-1 Hydroxylamine Hydrochloride	Yes	Yes	No	No	Yes	2X	None Allocated	
7732-18-5 Distilled Water	No	No	No	No	No	None Allocated	None Allocated	
<b>product 4032 as a whole</b>	Yes	No	No	No	No	None Allocated	None Allocated	Yes

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**16. Other Information**

Store tightly closed, away from heat, light, and acids.

**Prepared By:** IP, Regulatory Affairs Department

**Revised:** 2004-07-05

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