



Issuing Date 8/17/2012

Revision Number 0

1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** SODIUM HYDROXIDE REAGENT WITH METAL INHIBITOR  
**Product Code(s)** 4259  
**Recommended Use** Test kit reagent. Industrial (not for food or food contact use). Laboratory chemicals.  
**Company** LaMotte Company, Inc.  
802 Washington Avenue  
P.O. Box 329  
Chestertown, MD 21620  
USA  
**Emergency Telephone Number** 24 Hour Emergency Number (CHEM-TEL):  
USA, Canada, Puerto Rico 1-800-255-3924  
Outside North American Continent (Call collect) 813-248-0585

2. HAZARDS IDENTIFICATION

**DANGER!**

**Emergency Overview**  
Corrosive  
Causes burns to any area of contact  
Risk of serious damage to eyes  
Harmful if swallowed

**Appearance** Clear, colorless      **Physical State** Liquid      **Odor** Odorless

**OSHA Regulatory Status** This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Potential Health Effects**  
**Principle Routes of Exposure** Eye contact, Skin contact, Ingestion, Inhalation.

**Acute Toxicity**  
**Eyes** Causes burns. Risk of serious damage to eyes.  
**Skin** Causes burns. Symptoms can include redness, itching, and pain.  
**Inhalation** Irritating to mucous membranes. Depending on exposure, the effects from inhalation of corrosive mists can vary from mild irritation to serious damage to respiratory tract.  
**Ingestion** Harmful if swallowed. Can burn mouth, throat, stomach, and GI tract. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Chronic Effects** Repeated exposure may cause damage to the tissues of the mucous membranes, respiratory tract, eyes, and skin. Symptoms may be delayed.

**Aggravated Medical Conditions** Hypersensitivity may occur in those with preexisting skin disorders. Respiratory disorders. Preexisting eye disorders.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Magnesium chloride, hexahydrate	7791-18-6	<0.1
Sodium hydroxide	1310-73-2	4-6
Triethanolamine	102-71-6	4-6
Water	7732-18-5	to 100%

## 4. FIRST AID MEASURES

<b>General Advice</b>	Do not get in eyes, on skin, or on clothing. Show this safety data sheet to the doctor in attendance.
<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes. Call a physician immediately.
<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and contact emergency personnel. Call a physician immediately.
<b>Ingestion</b>	DO NOT INDUCE VOMITING. Drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician immediately.
<b>Protection of First-aiders</b>	Use personal protective equipment. See Section 8 for more detail. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

## 5. FIRE-FIGHTING MEASURES

<b>Flammable Properties</b>	Not a fire hazard.			
<b>Flash Point</b>	179°C (354°F) OC for Triethanolamine			
<b>Suitable Extinguishing Media</b>	Water spray, dry chemical, carbon dioxide (CO <sub>2</sub> ), or foam.			
<b>Explosion Data</b>				
<b>NFPA</b>	<b>Health Hazard</b> 3	<b>Flammability</b> 0	<b>Stability</b> 0	<b>Physical and Chemical Hazards</b> -
<b>HMIS</b>	<b>Health Hazard</b> 3	<b>Flammability</b> 0	<b>Stability</b> 2	

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Refer to Section 8. Use personal protective equipment. Avoid contact with skin, eyes and inhalation of vapors.
<b>Methods for Cleaning Up</b>	Neutralize spills with acid such as acetic, hydrochloric or sulfuric, absorb with vermiculite or other inert substance, and package in a suitable container for disposal. Keep in suitable and closed containers for disposal. After cleaning, flush away traces with water.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Handle in accordance with good industrial hygiene and safety practice. Prevent contact with skin, eyes, and clothing. Do not ingest. Do not eat, drink, or smoke when using this product.
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**Storage** Keep containers tightly closed in a dry, cool, and well-ventilated place. Separate from acids. Keep away from heat, sparks and open flame. - No smoking. Do not store with aluminum or magnesium. Avoid contact with copper or copper alloy. Keep from freezing. Keep out of the reach of children.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Magnesium chloride, hexahydrate 7791-18-6	None Known	None Known	None Known
Sodium hydroxide 1310-73-2	None Known	TWA: 2 mg/m <sup>3</sup>	IDLH: 10 mg/m <sup>3</sup> Ceiling: 2 mg/m <sup>3</sup>
Triethanolamine 102-71-6	TWA: 5 mg/m <sup>3</sup>	None Known	None Known
Water 7732-18-5	None Known	None Known	None Known

**Engineering Measures** Showers  
Eyewash stations  
Ventilation systems.

### Personal Protective Equipment

#### Eye/Face Protection

Safety glasses with side-shields. If splashes are likely to occur, wear: Face-shield.

#### Skin and Body Protection

Incidental contact/splash protection: Wear protective gloves/clothing. Repeated or prolonged contact: Chemical resistant protective sleeves.

#### Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Clear, colorless	<b>Odor</b>	Odorless
<b>Physical State</b>	Liquid	<b>pH</b>	14
<b>Flash Point</b>	179°C (354°F) OC for Triethanolamine	<b>Autoignition Temperature</b>	315°C (599°F) for Triethanolamine
<b>Boiling Point/Range</b>	No information available		
<b>Vapor Pressure</b>	No information available	<b>Vapor Density</b>	No information available

## 10. STABILITY AND REACTIVITY

**Stability** Stable under normal conditions of use and storage.

**Incompatible Products** Strong acids. Strong oxidizing agents. Contact with metals (aluminum, zinc, tin) may release hydrogen gas. Aluminium. Magnesium powder. Copper. Copper alloys.

**Conditions to Avoid** Excessive heat. Incompatible products.

**Hazardous Decomposition Products** Carbon oxides (CO<sub>x</sub>). Nitrogen oxides (NO<sub>x</sub>).

**Hazardous Polymerization** Hazardous polymerization does not occur.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Magnesium chloride, hexahydrate	8100 mg/kg ( Rat )	None Known	None Known
Sodium hydroxide	None Known	1350 mg/kg ( Rabbit )	None Known
Triethanolamine	4190 mg/kg ( Rat )	2000 mg/kg ( Rabbit )	None Known
Water	90 mL/kg ( Rat )	None Known	None Known

**Chronic Toxicity****Chronic Toxicity**

Repeated exposure may cause damage to the tissues of the mucous membranes, respiratory tract, eyes, and skin. Symptoms may be delayed.

Chemical Name	ACGIH	IARC	NTP	OSHA
Magnesium chloride, hexahydrate	None Known	None Known	None Known	None Known
Sodium hydroxide	None Known	None Known	None Known	None Known
Triethanolamine	None Known	Group 3	None Known	None Known
Water	None Known	None Known	None Known	None Known

**IARC: (International Agency for Research on Cancer)**

Group 3 - Not classifiable as to its carcinogenicity to humans

**Endocrine Disruptor Information**

Chemical Name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Magnesium chloride, hexahydrate	None Known	None Known	None Known
Sodium hydroxide	None Known	None Known	None Known
Triethanolamine	None Known	None Known	None Known
Water	None Known	None Known	None Known

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

Large amounts will affect pH and harm aquatic organisms.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Daphnia Magna (Water Flea)
Magnesium chloride, hexahydrate	None Known	None Known	None Known	None Known
Sodium hydroxide	None Known	LC50= 45.4 mg/L Oncorhynchus mykiss 96 h	None Known	None Known
Triethanolamine	EC50 = 169 mg/L 96 h EC50 = 216 mg/L 72 h	LC50 450 - 1000 mg/L Lepomis macrochirus 96 h LC50= 11800 mg/L Pimephales promelas 96 h	EC50 > 10000 mg/L 30 min	EC50 = 1386 mg/L 24 h
Water	None Known	None Known	None Known	None Known

**Persistence and Degradability**

No information available.

Chemical Name	Log Pow
Magnesium chloride, hexahydrate	None Known
Sodium hydroxide	None Known
Triethanolamine	= -2.53
Water	None Known

## 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Method**

Dispose of in accordance with local regulations.

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Magnesium chloride, hexahydrate - 7791-18-6	None Known	None Known	None Known	None Known
Sodium hydroxide - 1310-73-2	None Known	None Known	None Known	None Known
Triethanolamine - 102-71-6	None Known	None Known	None Known	None Known
Water - 7732-18-5	None Known	None Known	None Known	None Known

## 14. TRANSPORT INFORMATION

### DOT

Proper Shipping Name	SODIUM HYDROXIDE SOLUTION
Hazard Class	8
UN-No	1824
Packing Group	II
Reportable Quantity (RQ)	1000

### IATA

UN-No	1824
Proper Shipping Name	SODIUM HYDROXIDE SOLUTION
Hazard Class	8
Packing Group	II

### IMDG/IMO

Proper Shipping Name	SODIUM HYDROXIDE SOLUTION
Hazard Class	8
UN-No	1824
Packing Group	II

## 15. REGULATORY INFORMATION

### International Inventories

Component	TSCA	DSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Magnesium chloride, hexahydrate 7791-18-6 (<0.1)	TSCA	DSL	EINECS/ELINCS	1-233	X	KECL	X	X
Sodium hydroxide 1310-73-2 (4-6)	Present	X	X	1-410; 2-1972	X	KE-31487	X	X
Triethanolamine 102-71-6 (4-6)	Present	X	X	2-308	X	KE-25940	X	X
Water 7732-18-5 (to 100%)	Present	X	X	ENCS	X	KE-35400	X	X

### U.S. Federal Regulations

#### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Magnesium chloride, hexahydrate	7791-18-6	<0.1	None Known
Sodium hydroxide	1310-73-2	4-6	None Known
Triethanolamine	102-71-6	4-6	None Known
Water	7732-18-5	to 100%	None Known

#### SARA 311/312 Hazard Categories

Acute Health Hazard Yes

Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

**Clean Water Act**

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Magnesium chloride, hexahydrate 7791-18-6 ( <0.1 )	None Known	None Known	None Known	None Known
Sodium hydroxide 1310-73-2 ( 4-6 )	None Known	None Known	None Known	None Known
Triethanolamine 102-71-6 ( 4-6 )	None Known	None Known	None Known	None Known
Water 7732-18-5 ( to 100% )	None Known	None Known	None Known	None Known

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Magnesium chloride, hexahydrate	7791-18-6	<0.1	None Known	None Known	None Known	None Known
Sodium hydroxide	1310-73-2	4-6	None Known	None Known	None Known	None Known
Triethanolamine	102-71-6	4-6	None Known	Group I	None Known	None Known
Water	7732-18-5	to 100%	None Known	None Known	None Known	None Known

**CERCLA**

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Magnesium chloride, hexahydrate	None Known	None Known
Sodium hydroxide	1000 lb	None Known
Triethanolamine	None Known	None Known
Water	None Known	None Known

**U.S. State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals

Chemical Name	CAS-No	California Prop. 65
Magnesium chloride, hexahydrate	7791-18-6	None Known
Sodium hydroxide	1310-73-2	None Known
Triethanolamine	102-71-6	None Known
Water	7732-18-5	None Known

**U.S. State Right-to-Know Regulations**

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Magnesium chloride, hexahydrate	None Known	None Known	None Known	None Known	None Known
Sodium hydroxide	X	X	X	None Known	X
Triethanolamine	X	None Known	X	None Known	X
Water	None Known	None Known	None Known	None Known	None Known

**International Regulations****Mexico - Grade**

Chemical Name	Carcinogen Status	Exposure Limits
Magnesium chloride, hexahydrate	None Known	None Known

Sodium hydroxide	None Known	None Known
Triethanolamine	None Known	None Known
Water	None Known	None Known

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

Component	WHMIS Hazard Class
Magnesium chloride, hexahydrate 7791-18-6 ( <0.1 )	Uncontrolled product according to WHMIS classification criteria
Sodium hydroxide 1310-73-2 ( 4-6 )	1 % E
Triethanolamine 102-71-6 ( 4-6 )	1 % Uncontrolled product according to WHMIS classification criteria
Water 7732-18-5 ( to 100% )	Uncontrolled product according to WHMIS classification criteria



16. OTHER INFORMATION

NFPA	HMIS	PPE	Transport Symbol						
	<table border="1"> <tr> <td>Health Hazard</td> <td>3</td> </tr> <tr> <td>Fire Hazard</td> <td>0</td> </tr> <tr> <td>Reactivity</td> <td>2</td> </tr> </table>	Health Hazard	3	Fire Hazard	0	Reactivity	2		
Health Hazard	3								
Fire Hazard	0								
Reactivity	2								

Prepared By Regulatory Affairs Department  
 Issuing Date 8/17/2012  
 Revision Date -  
 Revision Note Update to Format.  
 Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS