



Issuing Date 5/28/2010

Revision Number 0

1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** Silica Reagent 1  
**Product Code(s)** 4571  
**Recommended Use** Laboratory chemicals. Industrial (not for food or food contact use).  
**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  
Can cause severe irritation or burns to every area of contact  
May be fatal if inhaled, or swallowed  
**Appearance** Clear, colorless solution      **Physical State** Liquid      **Odor** Pungent

**OSHA Regulatory Status** This product is an article which contains a chemical substance. Safety information is given for exposure to the article as sold, but considers exposure to the chemical if user has direct eye and skin contact with the chemical.

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

**Acute Toxicity**  
**Eyes** Corrosive to the eyes and may cause severe damage including blindness.  
**Skin** Contact causes severe skin irritation and possible burns. Can cause redness, pain, and severe skin burns. Harmful if absorbed through skin.  
**Inhalation** Irritating to mucous membranes. Inhalation of vapors can cause coughing, choking, inflammation of the nose, throat, and upper respiratory tract; in severe cases, pulmonary edema, circulatory failure, and death.  
**Ingestion** Harmful if swallowed. Can burn mouth, throat, and stomach. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Chronic Effects** Chronic exposure to corrosive vapors may cause erosion of the teeth.

**Aggravated Medical Conditions** Skin disorders. Respiratory disorders. Preexisting eye disorders.

3. COMPOSITION/INFORMATION ON INGREDIENTS

**Formula** HCl in water

Chemical Name	CAS-No	Weight %
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Hydrochloric acid	7647-01-0	10
Water	7732-18-5	to 100%

#### 4. FIRST AID MEASURES

<b>General Advice</b>	Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray.
<b>Eye Contact</b>	Immediately flush eyes with gentle stream of water for at least 15 minutes, occasionally lifting upper and lower eyelids. Call a physician immediately.
<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. Excess acid on skin can be neutralized with a 2% solution of sodium bicarbonate in water.. Call a physician immediately.
<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician immediately.
<b>Ingestion</b>	Do NOT induce vomiting. Drink plenty of water. Clean mouth with water. Call a physician immediately. Never give anything by mouth to an unconscious person.
<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 flammable.
<b>Flash Point</b>	Not applicable
<b>Suitable Extinguishing Media</b>	Dry chemical, CO <sub>2</sub> , water spray or alcohol-resistant foam.

#### **Explosion Data**

#### **Specific Hazards Arising from the Chemical**

Contact with metals may evolve flammable hydrogen gas.

<b>NFPA</b>	<b>Health Hazard</b> 3	<b>Flammability</b> 0	<b>Stability</b> 0	<b>Physical and Chemical Hazards</b> -
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#### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Ensure adequate ventilation. Use personal protective equipment. Refer to Section 8. Avoid contact with skin, eyes and inhalation of vapors.
<b>Methods for Cleaning Up</b>	Cover spill with alkaline material (sodium bicarbonate) to neutralize, then containerize slurry, and hold for later disposal. If local regulations permit, dilute slurry with water and rinse to drain with excess water.. 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.
<b>Storage</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Store at room temperature. Keep away from direct sunlight. Keep away from heat and incompatibles. Keep out of the reach of children.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Hydrochloric acid 7647-01-0	None Established	None Established	IDLH: 50 ppm Ceiling: 7 mg/m <sup>3</sup> Ceiling: 5 ppm
Water 7732-18-5	None Established	None Established	None Established

**Personal Protective Equipment****Eye/Face Protection**

Safety glasses with side-shields.

**Skin and Body Protection**

Wear protective gloves/clothing.

**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 solution	<b>Odor</b>	Pungent
<b>Physical State</b>	Liquid	<b>pH</b>	<1
<b>Flash Point</b>	Not applicable	<b>Autoignition Temperature</b>	Not applicable
<b>Boiling Point/Range</b>	~100 °C / 212 °F	<b>Flammability Limits in Air</b>	Not applicable
<b>Specific Gravity</b>	1 (water = 1)	<b>Vapor Pressure</b>	Essentially the same as water
<b>Vapor Density</b>	Essentially the same as water		

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under normal conditions.
<b>Incompatible Products</b>	Strong bases. Metals. Cyanides. Sulfides. Formaldehyde.
<b>Conditions to Avoid</b>	Excessive heat. Incompatible products. Direct sunlight.
<b>Hazardous Decomposition Products</b>	Chlorine gas. Hydrogen gas. Hydrogen chloride.
<b>Hazardous Reactions</b>	Thermal oxidative decomposition produces toxic chlorine gas and flammable hydrogen gas. May react with metals to produce flammable hydrogen gas.
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.

## 11. TOXICOLOGICAL INFORMATION

**Acute Toxicity**

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hydrochloric acid	700 mg/kg ( Rat )	5010 mg/kg ( Rabbit )	3124 ppm ( Rat ) 1 h
Water	90 mL/kg ( Rat )	None Established	None Established

**Chronic Toxicity**

**Chronic Toxicity** Chronic exposure to corrosive vapors may cause erosion of the teeth.

**Carcinogenicity** Hydrochloric acid is classified by IARC as Group 3 - not classifiable as to its carcinogenicity to humans.

Chemical Name	ACGIH	IARC	NTP	OSHA
Hydrochloric acid	None Established	None Established	None Established	None Established
Water	None Established	None Established	None Established	None Established

Chemical Name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Hydrochloric acid	None Established	None Established	None Established
Water	None Established	None Established	None Established

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Concentrated Hydrochloric acid may be toxic to aquatic life..

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Daphnia Magna (Water Flea)
Hydrochloric acid	None Established	LC50= 282 mg/L Gambusia affinis 96 h	None Established	None Established
Water	None Established	None Established	None Established	None Established

Chemical Name	Log Pow
Hydrochloric acid	None Established
Water	None Established

## 13. DISPOSAL CONSIDERATIONS

### Waste Disposal Method

Dispose according to federal, state, and local regulations. If permitted, neutralize reagent with sodium bicarbonate/sodium carbonate, add slurry to large volume of water to dilute, rinse to drain with excess water. .

Chemical Name
Hydrochloric acid - 7647-01-0
Water - 7732-18-5

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Hydrochloric acid - 7647-01-0	None Established	None Established	None Established	None Established
Water - 7732-18-5	None Established	None Established	None Established	None Established

Chemical Name	California Hazardous Waste Status
Hydrochloric acid	Toxic; Corrosive; Reactive

## 14. TRANSPORT INFORMATION

### DOT

**Proper Shipping Name** HYDROCHLORIC ACID SOLUTION  
**Hazard Class** 8  
**UN-No** 1789  
**Packing Group** II  
**Reportable Quantity (RQ)** 5000

### IATA

<b>UN-No</b>	1789
<b>Proper Shipping Name</b>	HYDROCHLORIC ACID SOLUTION
<b>Hazard Class</b>	8
<b>Packing Group</b>	II

**IMDG/IMO**

<b>Proper Shipping Name</b>	HYDROCHLORIC ACID SOLUTION
<b>Hazard Class</b>	8
<b>UN-No</b>	1789
<b>Packing Group</b>	II

## 15. REGULATORY INFORMATION

**International Inventories**

Component	TSCA	DSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Hydrochloric acid 7647-01-0 ( 10 )	T	X	X	X	X	KE-20189 X	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 contains a chemical or 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 %
Hydrochloric acid	7647-01-0	10	1.0
Water	7732-18-5	to 100%	None Established

**SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	Yes
<b>Chronic Health Hazard</b>	Yes
<b>Fire Hazard</b>	No
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	No

**Clean Water Act**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Hydrochloric acid 7647-01-0 ( 10 )	5000 lb	None Established	None Established	X
Water 7732-18-5 ( to 100% )	None Established	None Established	None Established	None Established

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Hydrochloric acid	7647-01-0	10	Present	None Established	None Established	None Established
Water	7732-18-5	to 100%	None Established	None Established	None Established	None Established

**CERCLA**

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Hydrochloric acid	5000 lb	5000 lb

Water	None Established	None Established
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**U.S. State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

Chemical Name	CAS-No	California Prop. 65
Hydrochloric acid	7647-01-0	None Established
Water	7732-18-5	None Established

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Hydrochloric acid	X	X	X	X	X
Water	None Established	None Established	None Established	None Established	None Established

**International Regulations**

**Mexico - Grade** No information available.

Chemical Name	Carcinogen Status	Exposure Limits
Hydrochloric acid	None Established	None Established
Water	None Established	None Established

**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.

**WHMIS Hazard Class**

E Corrosive material  
D1A Very toxic materials



**16. OTHER INFORMATION**

NFPA	HMIS	PPE	Transport Symbol						
	<table border="1"> <tr> <td>Health Hazard</td> <td style="text-align: center;"><b>3</b></td> </tr> <tr> <td>Fire Hazard</td> <td style="text-align: center;"><b>0</b></td> </tr> <tr> <td>Reactivity</td> <td style="text-align: center;"><b>1</b></td> </tr> </table>	Health Hazard	<b>3</b>	Fire Hazard	<b>0</b>	Reactivity	<b>1</b>		
Health Hazard	<b>3</b>								
Fire Hazard	<b>0</b>								
Reactivity	<b>1</b>								

**Prepared By** Regulatory Affairs Department

**Issuing Date** 5/28/2010

**Revision Date**

**Revision Note** Initial Release.

**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**