

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### Product identifier

**Product name** Hydrochloric Acid 2.5N

### Other means of identification

**Product Code(s)** 6251

**UN-No** 1789

### Recommended use of the chemical and restrictions on use

**Recommended Use** Laboratory chemicals. Industrial (not for food or food contact use). Use as a laboratory reagent.

### Details of the supplier of the safety data sheet

#### Manufacturer Address

LaMotte Company, Inc.  
802 Washington Avenue  
P.O. Box 329  
Chestertown, MD 21620 USA  
T 410-778-3100  
F 410-778-9748

### 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

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3

### EMERGENCY OVERVIEW

#### DANGER POISON

#### Hazard statements

Causes skin irritation. Causes serious eye damage. May cause respiratory irritation. May cause drowsiness or dizziness.



**Appearance** Clear, colorless

**Physical state** liquid

**Odor** pungent

#### Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

IF ON SKIN: Wash with plenty of soap and water.  
If skin irritation occurs: Get medical advice/attention.  
Take off contaminated clothing and wash before reuse  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
Call a POISON CENTER or doctor/physician if you feel unwell  
IF SWALLOWED, Drink 1 or 2 glasses of water, Call a physician immediately

**Precautionary Statements - Storage**

Store in a well-ventilated place. Keep container tightly closed. Store locked up.

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant.

**Other Hazards**

May be harmful if swallowed

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

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

**4. FIRST AID MEASURES****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>	Remove 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. Clean mouth with water. Call a physician immediately. Never give anything by mouth to an unconscious person.
<b><u>Self-protection of the first aider</u></b>	Use personal protective equipment. See section 8 for more information. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give 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****Suitable extinguishing media**

Dry chemical, CO<sub>2</sub>, water spray or alcohol-resistant foam.

**Specific hazards arising from the chemical**

Contact with most metals causes the formation of explosive and flammable hydrogen gas.

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Ensure adequate ventilation. Use personal protective equipment. See section 8. Avoid contact with skin, eyes, and inhalation of vapors.

**Environmental precautions** See Section 12 for additional Ecological Information.

### Methods and material for containment and cleaning up

**Methods for cleaning up** Neutralize spill with alkaline material (sodium bicarbonate), being careful to prevent splattering, 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

### Precautions for safe handling

**Handling** Handle in accordance with good industrial hygiene and safety practice. Prevent contact with skin, eyes, and clothing. Do not taste or swallow. Do not eat, drink, or smoke when using this product.

### Conditions for safe storage, including any incompatibilities

**Storage** Keep containers tightly closed in a dry, cool and well-ventilated place. Store at room temperature. Keep away from direct sunlight. Store away from incompatible materials. Keep out of the reach of children.

**Incompatible Products** Strong bases. Metals. Cyanides. Sulfides. Formaldehyde.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Hydrochloric acid 7647-01-0	Ceiling: 2 ppm	Ceiling 5 ppm (7mg/m <sup>3</sup> )	IDLH: 50 ppm Ceiling: 5 ppm Ceiling: 7 mg/m <sup>3</sup>
Water 7732-18-5	-	-	Not Established

### Appropriate engineering controls

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

### Individual protection measures, such as personal protective equipment

**Eye/Face Protection** Wear safety glasses with side shields (or goggles).

**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

### Information on basic physical and chemical properties

<b>Physical state</b>	liquid	<b>Odor</b>	pungent
<b>Appearance</b>	Clear, colorless		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	<1	No information available
Melting point / freezing point	No information available	
Boiling point / boiling range	ca 100 °C / 212 °F	
Flash point	No information available	
Evaporation rate		
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific gravity	1 (water = 1)	
Water solubility	No information available	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

### Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under normal conditions of use and storage.
<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.
<b>Conditions to avoid</b>	Excessive heat. Incompatible products. Direct sunlight.
<b>Incompatible materials</b>	Strong bases. Metals. Cyanides. Sulfides. Formaldehyde.
<b>Hazardous decomposition products</b>	Chlorine gas. Hydrogen gas. Hydrogen chloride.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Hydrochloric acid 7647-01-0	238 - 277 mg/kg ( Rat )	> 5010 mg/kg ( Rabbit )	= 1.68 mg/L ( Rat ) 1 h
Water 7732-18-5	> 90 mL/kg ( Rat )	Not Established	Not Established

**Information on toxicological effects****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 7647-01-0	Not Established	Group 3	Not Established	Not Established
Water 7732-18-5	Not Established	Not Established	Not Established	Not Established

**Chronic toxicity**

Chronic exposure to corrosive mists or vapors may cause erosion of the teeth.

ATEmix (oral)	2380
ATEmix (dermal)	50100 mg/kg
ATEmix (inhalation-dust/mist)	5 mg/l

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
Hydrochloric acid 7647-01-0	Not Established	282: 96 h Gambusia affinis mg/L LC50 static	Not Established
Water 7732-18-5	Not Established	Not Established	Not Established

**Persistence and degradability**

No information available.

**Bioaccumulation/Accumulation**

No information available.

Chemical name	Log Pow
Hydrochloric acid 7647-01-0	Not Established
Water 7732-18-5	Not Established

## 13. DISPOSAL CONSIDERATIONS

**Disposal Methods**

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.

**Contaminated packaging**

Do not reuse empty containers.

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Hydrochloric acid 7647-01-0	Not Established	-	Not Established	Not Established
Water 7732-18-5	Not Established	-	Not Established	Not Established

Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Hydrochloric acid 7647-01-0	Not Established	Not Established	Not Established	Not Established
Water 7732-18-5	Not Established	Not Established	Not Established	Not Established

Chemical name	California Hazardous Waste Status
Hydrochloric acid 7647-01-0	-
Water 7732-18-5	-

## 14. TRANSPORT INFORMATION

**DOT**

Proper shipping name	HYDROCHLORIC ACID
UN-No	1789
Hazard Class	8
Packing group	II
Reportable Quantity (RQ)	5000

**IATA**

Proper shipping name	HYDROCHLORIC ACID
UN-No	1789
Hazard Class	8
Packing group	II

**IMDG/IMO**

Proper shipping name	HYDROCHLORIC ACID
UN-No	1789
Hazard Class	8
Packing group	II

## 15. REGULATORY INFORMATION

**International Inventories**

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

**Legend:**

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory  
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List  
 EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
 ENCS - Japan Existing and New Chemical Substances  
 IECSC - China Inventory of Existing Chemical Substances  
 KECL - Korean Existing and Evaluated Chemical Substances  
 PICCS - Philippines Inventory of Chemicals and Chemical Substances  
 AICS - Australian Inventory of Chemical Substances

**US 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	SARA 313 - Threshold Values %
Hydrochloric acid 7647-01-0	1.0
Water 7732-18-5	Not Established

**SARA 311/312 Hazard Categories**

Acute health hazard	Yes
Chronic Health Hazard	Yes

Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

**CWA (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)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Hydrochloric acid 7647-01-0	5000 lb	Not Established	Not Established	X
Water 7732-18-5	Not Established	Not Established	Not Established	Not Established

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	RQ
Hydrochloric acid 7647-01-0	5000 lb	5000 lb	RQ 5000 lb final RQ RQ 2270 kg final RQ
Water 7732-18-5	-	Not Established	-

**US State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals

Chemical name	California Proposition 65
Hydrochloric acid 7647-01-0	Not Established
Water 7732-18-5	Not Established

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

Chemical name	New Jersey	Massachusetts	Pennsylvania
Hydrochloric acid 7647-01-0	X	X	X
Water 7732-18-5	Not Established	Not Established	X

**CPSC (Consumer Product Safety Commission) - Specially Regulated Substances**

Chemical name	CPSC (Consumer Product Safety Commission) - Specially Regulated Substances
Hydrochloric acid 7647-01-0	Add POISON to label, 16 CFR 1500.129 (>=10%, free or chemically unneutralized)

**16. OTHER INFORMATION****NFPA**

Health hazard 3

Flammability 0

Instability 0

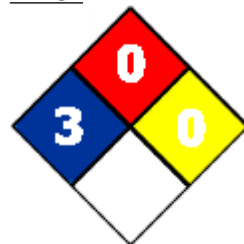
Physical and Chemical Hazards N/A

**HMIS**

Health hazard 3

Flammability 0

Stability 1



Health Hazard	<b>3</b>
Fire Hazard	<b>0</b>
Reactivity	<b>1</b>

Prepared by	Regulatory Affairs Department
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**Disclaimer**

The information provided on this SDS 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 Material Safety Data Sheet**