

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 07/03/2013 Revision date: 02/19/2020 Supersedes: 10/24/2017

Version: 1.3

#### **SECTION 1: Identification**

1.1. Identification

Product form : Mixtures

Product name : Hydrochloric Acid, 1.0N (1.0M)

Product code : LC15300

1.2. Recommended use and restrictions on use

Use of the substance/mixture : For laboratory and manufacturing use only.

Recommended use : Laboratory chemicals

Restrictions on use : Not for food, drug or household use

1.3. Supplier

LabChem, Inc.

1010 Jackson's Pointe Ct.
Zelienople, PA 16063 - USA
T 412-826-5230 - F 724-473-0647
info@labchem.com - www.labchem.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or +1-703-741-5970

#### SECTION 2: Hazard(s) identification

### 2.1. Classification of the substance or mixture

#### **GHS US classification**

Skin corrosion/irritation Category 1B Serious eye damage/eye irritation Category 1 H314 Causes severe skin burns and eye damage

H318 Causes serious eye damage

Full text of H statements: see section 16

#### 2.2. GHS Label elements, including precautionary statements

#### **GHS US labeling**

Hazard pictograms (GHS US)

Signal word (GHS US) : Danger

Hazard statements (GHS US) : H314 - Causes severe skin burns and eye damage

Precautionary statements (GHS US) : P260 - Do not breathe mist, vapors, spray.

P264 - Wash exposed skin thoroughly after handling.

P280 - Wear protective gloves, eye protection, protective clothing, face protection. P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated

clothing. Rinse skin with water/shower.

P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing. P310 - Immediately call a poison center or doctor/physician.

P363 - Wash contaminated clothing before reuse.

P405 - Store locked up.

P501 - Dispose of contents/container to comply with local, state and federal regulations.

### 2.3. Other hazards which do not result in classification

Other hazards not contributing to the

: None.

classification

## 2.4. Unknown acute toxicity (GHS US)

Not applicable

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#### **SECTION 3: Composition/Information on ingredients**

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

Name	Product identifier	%	GHS US classification
Water	(CAS-No.) 7732-18-5	96.41	Not classified
Hydrochloric Acid, 37% w/w	(CAS-No.) 7647-01-0	3.59	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335

Full text of hazard classes and H-statements : see section 16

#### **SECTION 4: First-aid measures**

#### 4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical

advice (show the label where possible).

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately

call a poison center or doctor/physician.

First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

Immediately call a poison center or doctor/physician.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to

do. Continue rinsing. Immediately call a poison center or doctor/physician.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor/physician.

#### 4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and

symptoms

: Based on available data, the classification criteria are not met.

Symptoms/effects : Causes severe skin burns and eye damage.
Symptoms/effects after inhalation : Possible inflammation of the respiratory tract.

Symptoms/effects after skin contact : Caustic burns/corrosion of the skin.

Symptoms/effects after eye contact : Causes serious eye damage.

Symptoms/effects after ingestion : Nausea. Vomiting.

Chronic symptoms : Affection/discolouration of the teeth.

#### 4.3. Immediate medical attention and special treatment, if necessary

Obtain medical assistance.

### **SECTION 5: Fire-fighting measures**

#### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

#### 5.2. Specific hazards arising from the chemical

Fire hazard : Not flammable. Explosion hazard : Not applicable.

Reactivity in case of fire : Thermal decomposition generates : Corrosive vapors.

#### 5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any

chemical fire. Prevent fire-fighting water from entering environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Other information : Not applicable.

#### **SECTION 6: Accidental release measures**

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Try to stop release. Dike and contain spill.

#### 6.1.1. For non-emergency personnel

Protective equipment : Gloves. Safety glasses. Protective clothing. Face-shield.

Emergency procedures : Evacuate unnecessary personnel.

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#### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

#### 6.3. Methods and material for containment and cleaning up

For containment : Take up liquid spill into inert absorbent material.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect

spillage. Store away from other materials.

#### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

### **SECTION 7: Handling and storage**

#### 7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or

smoking and when leaving work. Provide good ventilation in process area to prevent formation

of vapor. Do not breathe mist, vapors, spray.

Hygiene measures : Wash exposed skin thoroughly after handling. Wash contaminated clothing before reuse.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : incompatible

materials. Keep container closed when not in use.

Incompatible products : metals. cyanides. Strong bases.

Incompatible materials : Direct sunlight.

Prohibitions on mixed storage : KEEP SUBSTANCE AWAY FROM: (strong) bases.

Storage area : Keep container tightly closed.

Packaging materials : Do not store in corrodable metal.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Hydrochloric Acid, 37% w/w (7647-01-0)			
ACGIH	ACGIH Ceiling (mg/m³)	2.98 mg/m³	
ACGIH	ACGIH Ceiling (ppm)	2 ppm	
OSHA	OSHA PEL (Ceiling) (mg/m³)	7 mg/m³	
OSHA	OSHA PEL (Ceiling) (ppm)	5 ppm	
IDLH	US IDLH (ppm)	50 ppm	
NIOSH	NIOSH REL (ceiling) (mg/m³)	7 mg/m³	
NIOSH	NIOSH REL (ceiling) (ppm)	5 ppm	

## Water (7732-18-5)

Not applicable

#### 8.2. Appropriate engineering controls

Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

### 8.3. Individual protection measures/Personal protective equipment

#### Personal protective equipment:

Chemical resistant apron. Face shield. Gloves. Protective clothing. Safety glasses.

#### Hand protection:

Wear protective gloves.

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#### Eye protection:

Chemical goggles or face shield

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

Respiratory protection not required in normal conditions

#### Personal protective equipment symbol(s):











#### Other information:

Do not eat, drink or smoke during use.

### **SECTION 9: Physical and chemical properties**

#### Information on basic physical and chemical properties

Physical state : Liquid Color : Colorless Odorless Odor

Odor threshold : No data available

0 рΗ

: No data available Melting point : No data available Freezing point Boiling point No data available : No data available Flash point Relative evaporation rate (butyl acetate=1) : No data available Flammability (solid, gas) : Non flammable. Vapor pressure : No data available Relative vapor density at 20 °C No data available Relative density : No data available

Specific gravity / density : 1 – 1.1 Molecular mass : 36.46 g/mol

Solubility : Soluble in water. Soluble in ethanol. Soluble in methanol.

Log Pow No data available Auto-ignition temperature No data available Decomposition temperature : No data available Viscosity, kinematic No data available Viscosity, dynamic : No data available : No data available **Explosion limits** Explosive properties : Not applicable.

Oxidizing properties : None.

#### Other information

No additional information available

### **SECTION 10: Stability and reactivity**

Thermal decomposition generates: Corrosive vapors.

#### **Chemical stability**

Stable under normal conditions.

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#### 10.3. Possibility of hazardous reactions

Reacts violently with (some) bases: release of heat.

#### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

#### 10.5. Incompatible materials

metals. cyanides. Strong bases.

#### 10.6. Hazardous decomposition products

Hydrogen chloride. Thermal decomposition generates: Corrosive vapors.

### **SECTION 11: Toxicological information**

#### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Hydrochloric Acid, 37% w/w (7647-01-0)		
LD50 oral rat	700 mg/kg	
LD50 dermal rabbit	5010 mg/kg	
ATE US (oral)	700 mg/kg body weight	
ATE US (dermal)	5010 mg/kg body weight	

Water (7732-18-5)	
LD50 oral rat	≥ 90000 mg/kg
ATE US (oral)	90000 mg/kg body weight

Skin corrosion/irritation : Causes severe skin burns.

pH: 0

Serious eye damage/irritation : Causes serious eye damage.

pH: 0

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified

Hydrochloric Acid, 37% w/w (7647-01-0)	
STOT-single exposure	May cause respiratory irritation.

: Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified
Viscosity, kinematic : No data available

Likely routes of exposure : Skin and eye contact.

Potential Adverse human health effects and

symptoms

STOT-single exposure

: Based on available data, the classification criteria are not met.

Symptoms/effects : Causes severe skin burns and eye damage.
Symptoms/effects after inhalation : Possible inflammation of the respiratory tract.

Symptoms/effects after skin contact : Caustic burns/corrosion of the skin.
Symptoms/effects after eye contact : Causes serious eye damage.

Symptoms/effects after ingestion : Nausea. Vomiting.

Chronic symptoms : Affection/discolouration of the teeth.

### **SECTION 12: Ecological information**

#### 12.1. Toxicity

Hydrochloric Acid, 37% w/w (7647-01-0)		
LC50 fish 1	282 mg/l (96 h, Gambusia affinis, Pure substance)	
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Hydrochloric Acid, 37% w/w (7647-01-0)	
EC50 Daphnia 1	< 56 mg/l (72 h, Daphnia magna, Pure substance)

### 12.2. Persistence and degradability

Hydrochloric Acid, 1.0N (1.0M)		
Persistence and degradability	Not established.	
Hydrochloric Acid, 37% w/w (7647-01-0)		
Persistence and degradability	Biodegradability: not applicable.	
Chemical oxygen demand (COD)	Not applicable	
ThOD	Not applicable	
BOD (% of ThOD)	Not applicable	
Water (7732-18-5)		
Persistence and degradability	Not established.	

#### 12.3. Bioaccumulative potential

Hydrochloric Acid, 1.0N (1.0M)		
Bioaccumulative potential	Not established.	
Hydrochloric Acid, 37% w/w (7647-01-0)		
Log Pow	0.25 (QSAR)	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).	
Water (7732-18-5)		
Bioaccumulative potential	Not established.	

#### 12.4. Mobility in soil

Hydrochloric Acid, 37% w/w (7647-01-0)	
Ecology - soil	No (test)data on mobility of the components available. May be harmful to plant growth, blooming and fruit formation.

### 12.5. Other adverse effects

Other information : Avoid release to the environment.

### **SECTION 13: Disposal considerations**

#### 13.1. Disposal methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

## **SECTION 14: Transport information**

#### **Department of Transportation (DOT)**

In accordance with DOT

Transport document description : UN1789 Hydrochloric acid, 8, II

UN-No.(DOT) : UN1789

Proper Shipping Name (DOT) : Hydrochloric acid

Transport hazard class(es) (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136

Packing group (DOT) : II - Medium Danger Hazard labels (DOT) : 8 - Corrosive



DOT Packaging Non Bulk (49 CFR 173.xxx) : 202 DOT Packaging Bulk (49 CFR 173.xxx) : 242

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DOT Special Provisions (49 CFR 172.102)

: A3 - For combination packaging, if glass inner packaging (including ampoules) are used, they must be packed with absorbent material in tightly closed metal receptacles before packing in outer packaging.

A6 - For combination packaging, if plastic inner packaging are used, they must be packed in tightly closed metal receptacles before packing in outer packaging.

B3 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks and DOT 57 portable tanks are not authorized.

B15 - Packaging must be protected with non-metallic linings impervious to the lading or have a suitable corrosion allowance.

IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. N41 - Metal construction materials are not authorized for any part of a packaging which is

normally in contact with the hazardous material. T8 - 4 178.274(d)(2) Normal..... Prohibited

TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.

TP12 - This material is considered highly corrosive to steel.

DOT Packaging Exceptions (49 CFR 173.xxx) : 154
DOT Quantity Limitations Passenger aircraft/rail : 1 L

(49 CFR 173.27)

: 1 L

DOT Quantity Limitations Cargo aircraft only (49 : 30 L

CFR 175.75)

DOT Vessel Stowage Location : C - The material must be stowed "on deck only" on a cargo vessel and on a passenger vessel.

Other information : No supplementary information available.

#### **Transportation of Dangerous Goods**

Transport document description : UN1789 HYDROCHLORIC ACID, 8, II

UN-No. (TDG) : UN1789

Proper Shipping Name (Transportation of

Dangerous Goods)

: HYDROCHLORIC ACID

TDG Primary Hazard Classes : 8 - Class 8 - Corrosives
Packing group : II - Medium Danger

ERAP Index : 3 000
Explosive Limit and Limited Quantity Index : 1 L
Passenger Carrying Road Vehicle or Passenger : 1 L

Carrying Railway Vehicle Index

Transport by sea

## Transport document description (IMDG) : UN 1789 HYDROCHLORIC ACID, 8, II

UN-No. (IMDG) : 1789

Proper Shipping Name (IMDG) : HYDROCHLORIC ACID Class (IMDG) : 8 - Corrosive substances

Packing group (IMDG) : II - substances presenting medium danger

#### Air transport

Transport document description (IATA) : UN 1789 Hydrochloric acid, 8, II

UN-No. (IATA) : 1789

Proper Shipping Name (IATA) : Hydrochloric acid
Class (IATA) : 8 - Corrosives
Packing group (IATA) : II - Medium Danger

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#### **SECTION 15: Regulatory information**

#### 15.1. US Federal regulations

Hydrochloric Acid, 1.0N (1.0M)	
SARA Section 311/312 Hazard Classes	Health hazard - Skin corrosion or Irritation
	Health hazard - Serious eye damage or eye irritation

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

	Hydrochloric Acid, 37% w/w	CAS-No. 7647-01-0	3.59%
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Hydrochloric Acid, 37% w/w (7647-01-0)	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a final TSCA section 4 test rule.
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	500 lb
SARA Section 311/312 Hazard Classes	Health hazard - Acute toxicity (any route of exposure) Health hazard - Skin corrosion or Irritation Health hazard - Serious eye damage or eye irritation Health hazard - Specific target organ toxicity (single or repeated exposure)

#### 15.2. International regulations

### CANADA

No additional information available

#### Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List)

### **EU-Regulations**

No additional information available

### **National regulations**

No additional information available

#### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

### **SECTION 16: Other information**

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Revision date : 02/19/2020 Other information : None.

Full text of H-phrases: see section 16:

H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H335	May cause respiratory irritation

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NFPA health hazard	: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.
NFPA fire hazard	: 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.
NFPA reactivity	: 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.
Hazard Rating	

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is

Flammability : 0 Minimal Hazard - Materials that will not burn

1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high Physical

temperatures and pressures. Materials may react non-violently with water or undergo

hazardous polymerization in the absence of inhibitors.

Personal protection

C - Safety glasses, Gloves, Synthetic apron

#### SDS US LabChem

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