

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 07/21/2020

clothing. Rinse skin with water/shower. P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for brea P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Ren 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.	performance through chemistry	cording to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations ue date: 07/03/2013 Revision date: 07/21/2020 Supersedes: 10/24/2017 Version: 1.3
Product form : Mixtures : Mixtures : Mixtures : Mixtures : Hydrochloric Acid, 0.5N (0.5M) : Product code : L C15280 : L C	SECTION 1: Identification	
Product name : Hydrochloric Acid, 0.5N (0.5M) Product code : LC15280 Jae of the substance/mixture : For laboratory and manufacturing use only. Recommended use : Laboratory chemicals Retrictions on use : Not for food, drug or household use 13. Suppler : Suppler LabChen, Inc. Interpreterment : Chemicals 1010 Jackson's Pointe Ct. : Suppler : Commended use : CHEMTREC: 1-800-424-9300 or +1-703-741-5970 SECTION 2: Hazard(St) identification : CHEMTREC: 1-800-424-9300 or +1-703-741-5970 SECTION 2: Hazard(St) identification : CHEMTREC: 1-800-424-9300 or +1-703-741-5970 SECTION 2: Hazard(St) identification : CHEMTREC: 1-800-424-9300 or +1-703-741-5970 SECTION 2: Hazard(St) identification : CHEMTREC: 1-800-424-9300 or +1-703-741-5970 SECTION 2: Hazard(St) identification or buse and eye damage : : Sin consolon/intation Category 18 H314 Causes series skin burns and eye damage Full ext of H statements : see section 16 : : Danger La	1.1. Identification	
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classification	2.3. Other hazards which do not re-	sult in classification
2.4. Unknown acute toxicity (GHS US)	classification	: None.
	.4. Unknown acute toxicity (GHS U	JS)

Not applicable

Safety Data Sheet

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

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	98.19	Not classified
Hydrochloric Acid, 37% w/w	(CAS-No.) 7647-01-0	1.81	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 effect	s (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.

media
Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Do not use a heavy water stream.
cal
Not flammable.
Not applicable.
Thermal decomposition generates : Corrosive vapors.
utions for fire-fighters
Jse water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Do not enter fire area without proper protective equipment, including respiratory protection.
Not applicable.
es a la companya de l
nent and emergency procedures
Fry to stop release. Dike and contain spill.
Gloves. Safety glasses. Protective clothing. Face-shield.
Dives. Dalety glasses. I recetive clothing. I ace shield.

Safety Data Sheet

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

ccording to Federal	Register / Vol. 77, No. 58 / Monday, M	larch 26, 2012 / Rules and Regulations
6.1.2. For em	nergency responders	
Protective equipr	nent	: Equip cleanup crew with proper protection.
Emergency proce	edures	: Ventilate area.
6.2. Enviro	nmental precautions	
Prevent entry to s	sewers and public waters. Notify a	authorities if liquid enters sewers or public waters.
6.3. Method	ds and material for containmen	t and cleaning up
For containment		: Take up liquid spill into inert absorbent material. Take account of toxic/corrosive precipitation water.
Methods for clear	ning 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. Refere	nce to other sections	
See Heading 8. E	Exposure controls and personal p	rotection.
SECTION 7:	Handling and storage	
7.1. Precau	utions for safe handling	
Precautions for s	afe 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 measure	es	: Wash exposed skin thoroughly after handling. Wash contaminated clothing before reuse.
7.2. Condit	tions for safe storage, including	any incompatibilities
Technical measu	res	: Comply with applicable regulations.
Storage condition	ns	: Keep only in the original container in a cool, well ventilated place away from : incompatible materials. Keep container closed when not in use.
Incompatible prod	ducts	: metals. cyanides. Strong bases.
Incompatible mat	terials	: Direct sunlight.
Packaging mater	ials	: Do not store in corrodable metal.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Hydrochloric Acid, 0.5N (0.5M)	
No additional information available	
Hydrochloric Acid, 37% w/w (7647-01-0)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH Ceiling (mg/m ³)	2.98 mg/m ³
ACGIH Ceiling (ppm)	2 ppm
USA - OSHA - Occupational Exposure Limits	
OSHA PEL (Ceiling) (mg/m ³)	7 mg/m³
OSHA PEL (Ceiling) (ppm)	5 ppm
USA - IDLH - Occupational Exposure Limits	
US IDLH (ppm)	50 ppm
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (ceiling) (mg/m ³)	7 mg/m³
NIOSH REL (ceiling) (ppm)	5 ppm
Water (7732-18-5)	
No additional information available	

8.2.	Appropriate engineering controls

Appropriate engineering controls

: Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

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8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

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

Hand protection:

Wear protective gloves.

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 chemica	Il properties
9.1. Information on basic physical and	d chemical properties
Physical state	: Liquid
Color	: Colorless
Odor	: Odorless
Odor threshold	: No data available
pH	: 0.3
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
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
Explosion limits	: No data available
Explosive properties	: Not applicable.
Oxidizing properties	: None.

9.2. Other information

No additional information available

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SECTION 10: Stability and reactivity		
10.1. Reactivity		
Thermal decomposition generates : Corrosive v	apors.	
10.2. Chemical stability		
Stable under normal conditions.		
10.3. Possibility of hazardous reactions Reacts violently with (some) bases: release of h	neat	
10.4. Conditions to avoid		
Direct sunlight. Extremely high or low temperate	Jres.	
10.5. Incompatible materials		
metals. cyanides. Strong bases.		
10.6. Hazardous decomposition product	S	
Hydrogen chloride. Thermal decomposition ger	erates : Corrosive vapors.	
SECTION 11: Toxicological informa	tion	
11.1. Information on toxicological effect		
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: 0.3	
Serious eye damage/irritation	: Causes serious eye damage.	
	pH: 0.3	
Respiratory or skin sensitization	: Not classified	
Germ cell mutagenicity	: Not classified	
Carcinogenicity	: Not classified	
Reproductive toxicity	: Not classified	
STOT-single exposure	: Not classified	
Hydrochloric Acid, 37% w/w (7647-01-0)		
STOT-single exposure	May cause respiratory irritation.	
STOT-repeated exposure	: Not classified	
Aspiration hazard	: Not classified	
/iscosity, kinematic	: No data available	
Likely routes of exposure	: Skin and eye contact.	
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.	
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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 inf	ormation	
12.1. Toxicity		
Hydrochloric Acid, 37% w/w (764	7-01-0)	
LC50 fish 1	282 mg/l (96 h, Gambusia affinis, Pure substance)	
EC50 Daphnia 1	< 56 mg/l (72 h, Daphnia magna, Pure substance)	

12.2. Persistence and degradability

established. degradability: not applicable.
degradability: not applicable.
degradability: not applicable.
applicable
applicable
applicable
established.

12.3. Bioaccumulative potential

Hydrochloric Acid, 0.5N (0.5M)		
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 considerat	ions	
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	on	
Department of Transportation (DOT)		
In accordance with DOT		
Transport document description	: UN1789 Hydrochloric acid, 8, II	
UN-No.(DOT)	: UN1789	

: 8 - Class 8 - Corrosive material 49 CFR 173.136

: II - Medium Danger

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Hazard labels (DOT)	: 8 - Corrosive
	8
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 202
DOT Packaging Bulk (49 CFR 173.xxx)	: 242
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 (49 CFR 173.27)	: 1L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 30 L
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	: 3000
Explosive Limit and Limited Quantity Index	: 1L
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	: 1L
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

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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

SECTION 15: Regulatory information

15.1. US Federal regulations

Hydrochloric Acid, 0.5N (0.5M)	
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		AS-No. 7647-01-0	1.81%	
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 - Skir Health hazard - Seri	te toxicity (any route of a corrosion or Irritation ous eye damage or eye cific target organ toxicit	. ,	ure)

15.2. International regulations

CANADA		
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	:	07/21/2020
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 given
Flammability	: 0 Minimal Hazard - Materials that will not burn
Physical	: 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.
Personal protection	: C
	C - Safety glasses, Gloves, Synthetic apron
SDS US LabChem	

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