Hydrochloric acid

08256-1L

Version 1.2 Revision Date 11/12/2020 Print Date 05/11/2023

SECTION 1. IDENTIFICATION

Product name	:	Hydrochloric acid
Number	:	000000020861
Product Use Description	:	Laboratory chemicals
Manufacturer or supplier's details	:	Honeywell International Inc. 1953 South Harvey Street Muskegon, MI 49442
For more information call	:	1-800-368-0050 +1-231-726-3171(Monday-Friday, 9:00am-5:00pm)
In case of emergency call	:	**Medical: 1-800-498-5701 or +1-303-389-1414**
	:	**Transportation (CHEMTREC): 1-800-424-9300 or +1-703-527-3887**
	:	
	:	(24 hours/day, 7 days/week)

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Form	:	liquid
Color	:	colourless
Odor	:	stinging

Classification of the substance or mixture

Classification of the substance or mixture	:	Corrosive to metals, Category 1 Skin corrosion, Category 1A Serious eye damage, Category 1 Specific target organ toxicity - single exposure, Category 3, Respiratory system

GHS Label elements, including precautionary statements

Symbol(s) :

Signal word : Danger

Hazard statements : May be corrosive to metals.
Causes severe skin burns and eye damage.
May cause respiratory irritation.

Precautionary statements : **Prevention:**
Keep only in original container.
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.

Response:
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
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/ doctor.
Wash contaminated clothing before reuse.
Absorb spillage to prevent material damage.

Storage:
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Store in corrosive resistant container with a resistant inner liner.

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

Carcinogenicity

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : HCl

Chemical nature : Substance

Chemical name	CAS-No.	Concentration
Water	7732-18-5	>=65.00 - <70.00 %
Hydrochloric acid	7647-01-0	>=30.00 - <35.00 %

SECTION 4. FIRST AID MEASURES

General advice : First aider needs to protect himself. Remove from exposure, lie down. Immediately take off contaminated clothing and rinse body with plenty of water.

Inhalation : Remove to fresh air. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present. Call a physician immediately.

Skin contact : Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.

Eye contact : Protect unharmed eye. Irrigate eyes for at least 15 minutes with copious quantities of water, keeping eyelids apart and away from eyeballs during irrigation. Call a physician immediately.

Ingestion : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Drink plenty of water. Magnesium hydroxide (milk of Magnesia) as an antacid

may be given. Call a physician immediately.

Notes to physician

Most important symptoms/effects, acute and delayed	:	No information available.
Indication of immediate medical attention and special treatment needed, if necessary	:	Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. If use of water is necessary use copious amounts
Specific hazards during firefighting	:	Contact with metals liberates hydrogen gas. Vapours are heavier than air and may spread along floors.
Special protective equipment for firefighters	:	In the event of fire and/or explosion do not breathe fumes. Wear self-contained breathing apparatus and protective suit. No unprotected exposed skin areas.
Further information	:	The product itself does not burn. Use a water spray to cool fully closed containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Immediately evacuate personnel to safe areas. Wear personal protective equipment. Unprotected persons must be kept away. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Do not breathe vapours or spray mist.
Environmental precautions	:	Discharge into the environment must be avoided.

Prevent further leakage or spillage if safe to do so.
Do not flush into surface water or sanitary sewer system.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up	:	Ventilate the area. Neutralise with the following product(s): lime soda ash With acids neutralization takes place under development of heat.

SECTION 7. HANDLING AND STORAGE

Handling

Precautions for safe handling	:	Wear personal protective equipment. Use only in well-ventilated areas. Keep container tightly closed. Use only acid resistant equipment. When diluting, always add the product to water. Never add water to the product. Do not breathe vapours or spray mist.
Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.

Storage

Conditions for safe storage, including any incompatibilities	:	Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from physical damage.
Advice on common storage	:	Do not store together with: Oxidizing agents alkalines

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Protective measures	:	Ensure that eyewash stations and safety showers are close to

the workstation location.
Legal requirements are to be considered in regard of the selection, use and care of personal protective equipment.
Do not breathe vapours or spray mist.

Engineering measures : Use with local exhaust ventilation.
Use only acid resistant equipment.
acid resisting floor
Emergency sprinkling nozzle

Eye protection : Wear as appropriate:
Goggles or face shield, giving complete protection to eyes

Hand protection : Protective gloves
Gloves must be inspected prior to use.
Replace when worn.

Skin and body protection : Wear as appropriate:
Acid-resistant protective clothing
If splashes are likely to occur, wear:
Full protective suit

Respiratory protection : In case of insufficient ventilation wear suitable respiratory equipment.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
Provide adequate ventilation.
When using, do not eat, drink or smoke.
Wash thoroughly after handling.
Keep working clothes separately.
Remove and wash contaminated clothing before re-use.
Contaminated work clothing should not be allowed out of the workplace.
Do not swallow.
Do not breathe vapours or spray mist.
Do not get in eyes, on skin, or on clothing.
This material has an established AIHA ERPG exposure limit.
The current list of ERPG exposure limits can be found at http://www.aiha.org/insideaiha/GuidelineDevelopment/ERPG/Documents/2011erpgweelhandbook_table-only.pdf.

Exposure Guidelines

Components	CAS-No.	Value	Control parameters	Update	Basis

Hydrochloric acid	7647-01-0	Ceiling : Ceiling Limit Value:	(2 ppm)	2008	ACGIH:US. ACGIH Threshold Limit Values, as amended

Hydrochloric acid	7647-01-0	Ceil_Time : Ceiling Limit Value and Time Period (if specified) :	7 mg/m3 (5 ppm)	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards, as amended

Hydrochloric acid	7647-01-0	Ceiling : Ceiling Limit Value:	7 mg/m3 (5 ppm)	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended

Hydrochloric acid	7647-01-0	Ceiling : Ceiling Limit Value:	7 mg/m3 (5 ppm)	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	:	liquid
Color	:	colourless
Odor	:	stinging
Odor threshold	:	Note: No data available
pH	:	> 0.1 at , 20 °C
Melting point/range	:	ca. -35 °C

Boiling point/boiling range	:	ca. 42 °C at 1,013 hPa
Flash point	:	Note: Not applicable
Evaporation rate	:	Note: No data available
Flammability	:	Not applicable
Lower explosion limit	:	Note: Not applicable
Upper explosion limit	:	Note: Not applicable
Vapor pressure	:	965 hPa at 50 °C(122 °F) 190 hPa at 20 °C(68 °F)
Vapor density	:	Note: No data available
Density	:	1.16 g/cm3 at 20 °C
Water solubility	:	Note: completely miscible
Partition coefficient: n-octanol/water	:	Note: No data available
Ignition temperature	:	Note: Not applicable
Decomposition temperature	:	Note: No decomposition if used as directed., Fire or intense heat may cause violent rupture of packages.
Viscosity, dynamic	:	1.9 mPa.s at 15 °C
Viscosity, kinematic	:	Note: No data available

Molecular weight	:	36.46 g/mol
Corrosivity	:	Note: Corrosive to metals

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Hazardous polymerisation does not occur.
Conditions to avoid	:	Keep away from heat. Protect from moisture.
Incompatible materials	:	Gives off hydrogen by reaction with metals. Incompatible with strong bases and oxidizing agents. Ammonia Amines
Hazardous decomposition products	:	Hydrogen, by reaction with metals Hydrogen chloride gas

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	:	Note: Toxicity is determined by the corrosivity of the product.
Acute inhalation toxicity	:	Note: Toxicity is determined by the corrosivity of the product.
Acute dermal toxicity	:	Note: Toxicity is determined by the corrosivity of the product.

Skin irritation	:	Species: Rabbit Result: Corrosive Method: OECD Test Guideline 404
Eye irritation	:	Note: Conclusive and supporting classification (Ref: REACH Dossier - ECHA disseminated data)
Sensitisation	:	Species: Guinea pig Classification: non-sensitizing Test substance: anhydrous substance Method: OECD Test Guideline 406

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Toxicity to fish	:	semi-static test LC50: 3.25 - 3.5 mg/l Exposure time: 96 h Species: Lepomis macrochirus (Bluegill sunfish)
Toxicity to daphnia and other aquatic invertebrates	:	static test EC50: 4.92 mg/l Exposure time: 48 h Species: Daphnia (water flea) Method: OECD Test Guideline 202
Toxicity to algae	:	Growth rate EC50: 4.7 mg/l Exposure time: 72 h Species: Chlorella vulgaris (Fresh water algae) Method: OECD Test Guideline 201

Elimination information (persistence and degradability)

Biodegradability	:	Note: The methods for determining biodegradability are not

applicable to inorganic substances.

Further information on ecology

Ecotoxicology Assessment

Results of PBT assessment
This substance is not considered to be persistent, bioaccumulating and toxic (PBT)., This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Additional ecological information	:	Neutralisation will reduce ecotoxic effects.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	:	Observe all Federal, State, and Local Environmental regulations.

SECTION 14. TRANSPORT INFORMATION

DOT	UN/ID No.	:	UN 1789
	Proper shipping name	:	HYDROCHLORIC ACID
	Class		8
	Packing group		II
	Hazard Labels		8
IATA	UN/ID No.	:	UN 1789
	Description of the goods	:	HYDROCHLORIC ACID
	Class	:	8
	Packaging group	:	II
	Hazard Labels	:	8
	Packing instruction (cargo aircraft)	:	855
	Packing instruction (passenger aircraft)	:	851
	Packing instruction (passenger aircraft)	:	Y840
IMDG	UN/ID No.	:	UN 1789
	Description of the goods	:	HYDROCHLORIC ACID
	Class	:	8
	Packaging group	:	II

Hazard Labels	:	8
EmS Number	:	F-A, S-B
Marine pollutant	:	no
IMDG Code segregation group		1 – ACIDS,

SECTION 15. REGULATORY INFORMATION

Inventories

US. Toxic Substances Control Act	:	On TSCA Inventory
Australia. Industrial Chemical (Notification and Assessment) Act	:	On the inventory, or in compliance with the inventory
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)	:	All components of this product are on the Canadian DSL
Japan. Kashin-Hou Law List	:	On the inventory, or in compliance with the inventory
Korea. Existing Chemicals Inventory (KECI)	:	On the inventory, or in compliance with the inventory
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	:	On the inventory, or in compliance with the inventory
China. Inventory of Existing Chemical Substances (IECSC)	:	On the inventory, or in compliance with the inventory
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	:	On the inventory, or in compliance with the inventory

National regulatory information

US. EPA CERCLA	:	The following component(s) of this product is/are subject to

Hazardous Substances (40 CFR 302)		release reporting under 40 CFR 302 when release exceeds the Reportable Quantity (RQ):
		Reportable quantity: 5000 lbs
	:	Hydrochloric acid 7647-01-0
US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)	:	The following component(s) of this product is/are subject to the emergency planning provisions of 40 CFR 355 when there are amounts equal to or greater than the Threshold Planning Quantity (TPQ):
		Threshold Planning Quantity:: 5000 lbs
	:	Hydrochloric acid 7647-01-0
SARA 302 Components	:	The following components are subject to reporting levels established by SARA Title III, Section 302:
	:	Hydrochloric acid 7647-01-0
SARA 313 Components	:	The following components are subject to reporting levels established by SARA Title III, Section 313:
	:	Hydrochloric acid 7647-01-0
SARA 311/312 Hazards	:	Acute Health Hazard
California Prop. 65	:	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.
Massachusetts RTK	:	Hydrochloric acid 7647-01-0
New Jersey RTK	:	Hydrochloric acid 7647-01-0
Pennsylvania RTK	:	Hydrochloric acid 7647-01-0

SECTION 16. OTHER INFORMATION

HMIS III **NFPA**

Health hazard	:	3	3
Flammability	:	0	0
Physical Hazard	:	1	
Instability	:		1

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

Further information

The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.
Previous Issue Date: 03/19/2020
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