SAFETY DATA SHEET

Hydrochloric Acid

This SDS is valid for all grades that start with catalog number 284

1. IDENTIFICATION OF SUBSTANCE / MIXTURE AND OF SUPPLIER

Product Identifier: High Purity Chemicals
Synonyms: Hydrogen chloride
Other means of identification: CAS No. 7647-01-0
EINECS No. 231-595-7

Recommended use of the chemical and restrictions on use:

Supplier Details:

Pharmco Products, Inc.
58 Vale Road, Brookfield,
CT 06804, USA.
Tel: 203.740.3471
Fax: 203.740.3481
CCN17213

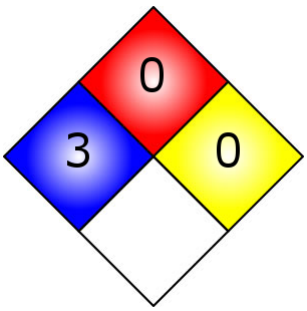
Pharmco Products, Inc.
1101 Isaac Shelby Drive, Shelbyville,
KY 40065, USA.
Tel: 502.232.7600
Fax: 502.633.6100
CCN17213

Emergency Contact: **CHEMTREC: 1.800.424.9300 (USA) / +1.703.527.3887 (International)**

2. HAZARDS IDENTIFICATION

OSHA Hazards:
Corrosive

NFPA



GHS label elements, including precautionary statements

Signal Word:
DANGER!

Hazard statement(s)

H314	Causes severe skin burns and eye damage.
H331	Toxic if inhaled

Precautionary statement(s)

P261	Avoid breathing dust/fumes/gas/mist/vapors.
P314	Get medical advice/ attention if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention.
P101	If medical advice is needed, have product container or label at hand.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P280	Wear protective gloves and eye and face protection.

GHS Classification(s)
Acute Toxicity, Inhalation (Category 3)
Skin corrosion (Category 1A)

Other hazards which do not result in classification:

Potential Health Effects:

Organ	Description
Eyes	Causes eye burns.
Ingestion	May be harmful if swallowed.
Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin	May be harmful if absorbed through skin. Causes skin burns.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical identity: Hydrochloric Acid
Common name / Synonym: Hydrogen chloride

Product Information: 203.740.3471 Emergency Assistance (CHEMTREC): 1.800.424.9300 (USA) +1.703.527.3887 (INT)

CAS number: 7647-01-0
EINECS number: 231-595-7
ICSC number: 0163
RTECS #: MW4025000
UN #: UN1789
EC #: 017-002-01-X

% Weight	Material	CAS
37	Hydrochloric acid	7647-01-0
63	Water	7732-18-5

4. FIRST AID MEASURES

General advice

Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Skin

Get medical aid. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing/shoes.

Inhalation

Remove person to fresh air. If signs/symptoms continue, get medical attention. Give oxygen or artificial respiration as needed.

Eyes

Thoroughly flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation persists, seek medical attention.

Ingestion

DO NOT induce vomiting. If vomiting does occur, have victim lean forward to prevent aspiration. Rinse mouth with water. Seek medical attention. Never give anything by mouth to an unconscious individual.

5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products):

Hydrogen chloride gas expected to be the primary hazardous combustion product.

Special protective equipment and precautions for firefighters:

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Keep

unopened containers cool by spraying with water.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment. Avoid dust formation. Do not inhale vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions:

Stop leak. Contain spill if possible and safe to do so. Prevent product from entering drains.

Methods and materials for containment and cleaning up:

Absorb with an inert dry material and place in an appropriate waste disposal container. Keep disposal containers closed when finished.

7. HANDLING AND STORAGE

Precautions for safe handling:

Do not get on skin or in eyes. Do not inhale vapor or mist. Take normal fire prevention measures.

Conditions for safe storage, including any incompatibilites:

Keep container tightly closed in a dry and well-ventilated place. Opened containers should be resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters, e.g., occupational exposure limit values or biological limit values:

Occupational Exposure Limits

Component	Source	Type	Value	Note
Hydrochloric Acid	US (OSHA)	Ceiling	5 ppm, 7 mg/m3	29 CFR 1910.1000 Table Z-1 Limits for Air Contaminants
Hydrochloric Acid	US (ACGIH)	Ceiling	5 ppm, 7.5 mg/m3	29 CFR 1910.1000 Table Z-1 Limits for Air Contaminants

Appropriate engineering controls:

General room or local exhaust ventilation is usually required to meet exposure limit(s). Electrical equipment should be grounded and conform to applicable electrical code.

Individual protection measures, such as personal protective equipment:

Respiratory protection:

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose

combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection:
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection:
Use chemical safety goggles and/or a full face shield where splashing is possible. Use equipment approved by appropriate government standards, such as NIOSH (US) or EN166 (EU) Maintain eye wash fountain and quick-drench facilities in work area.

Skin and body protection:
Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Hygiene measures:
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance *(physical state, color, etc.)*	Liquid. Light yellow.
Freezing point	-114 °C (-174 °F)
Initial boiling point and boiling range	-85 °C (-121 °F)
Vapor pressure	Gas
Relative Density	1.18 g/mL at 20 °C (68 °F)
Solubility(ies)	soluble
Formula (HYDROCHLORIC ACID)	HCl
Molecular Weight (HYDROCHLORIC ACID)	36.46 g/mol

10. STABILITY AND REACTIVITY

Possibility of hazardous reactions	No data available
Conditions to avoid (e.g., static discharge, shock or vibration)	No data available
Incompatible materials	Bases, Amines, Alkali metals, Metals, permanganates, e.g. potassium permanganate, Fluorine, metal acetylides, hexalithium disilicide
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions - Hydrogen chloride gas

11. TOXICOLOGICAL INFORMATION

- Hydrochloric acid 7647-01-0

Product Summary:
No data available for the mutagenic, teratogenic, or reproductive effects of the product.

Acute Toxicity:

No data available			

Irritation:

Eyes
Rabbit- Corrosive to eyes - 24 hours

Skin
Causes skin burns

Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: 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.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Other Hazards

Organ	Description
Eyes	Causes eye burns.
Ingestion	May be harmful if ingested.
Inhalation	May be harmful if inhaled. Material is extremely damaging to the upper respiratory tract.
Skin	May be harmful if absorbed through skin. Causes skin burns.

12. ECOLOGICAL INFORMATION

- Hydrochloric acid 7647-01-0

Ecotoxicity (aquatic and terrestrial, where available):
Acute Fish Toxicity (HYDROCHLORIC ACID)
LC50 / 96 hours / Mosquito fish - 282 mg/L

Persistence and degradability:
No data available

Bioaccumulative potential:
No data available

13. DISPOSAL CONSIDERATIONS

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging:

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

14. TRANSPORT INFORMATION

Description of waste residues and information on their safe handling and methods of disposal:

UN number	UN1789
UN proper shipping name	Hydrochloric acid
Transport hazard class(es)	8
Packing group *(if applicable)*	II

Reportable Quantity
5000 lbs
IMDG
UN-Number: UN1789 Class: 8 Packing Group: II
EMS-No: F-A, S-B
Proper shipping name: HYDROCHLORIC ACID
Marine pollutant: No
IATA
UN-Number: UN1789 Class: 8 Packing Group: II
Proper shipping name: Hydrochloric acid

15. REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product in question:

OSHA Hazards
Corrosive

All ingredients are on the following inventories or are exempted from listing

Country	Notification
Australia	AICS
Canada	DSL
China	IECS
European Union	EINECS
Japan	ENCS/ISHL
Korea	ECL
New Zealand	NZIoC
Philippines	PICCS
United States of America	TSCA

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
The following components are subject to reporting levels established by SARA Title III, Section 313:
HYDROCHLORIC ACID CAS-No. 7647-01-0 Revision Date 1993-04-24

SARA 311/312 Hazards
Acute Health Hazard

CERCLA
Hydrochloric acid CAS-No. 7647-01-0, RQ: 5,000 lbs

Massachusetts Right To Know Components
Hydrochloric acid CAS-No. 7647-01-0 Revision Date 1993-04-24

Pennsylvania Right To Know Components
Hydrochloric acid CAS-No. 7647-01-0 Revision Date 1993-04-24

New Jersey Right To Know Components
Hydrochloric acid CAS-No. 7647-01-0 Revision Date 1993-04-24

California Prop 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION:
INCLUDING INFORMATION ON PREPARATION AND REVISION OF THE SDS

Disclaimer

PHARMCO-AAPER believes that the information on this SDS was obtained from reliable sources. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, PHARMCO-AAPER does not assume responsibility and expressly disclaims liability for loss, damage, or expense arising out of or in any way connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this SDS information may not be applicable. Information is correct to the best of our knowledge at the date of the SDS publication.