



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
US OSHA Hazard Communication Standard (29 CFR 1910.1200)

Revision date 29-Oct-2025

Revision Number 1

1. Identification

Product identifier

Product Name Hydrochloric Acid 1.0M

Other means of identification

Product Code(s) 2723

UN number or ID number UN1789

Synonyms No information available

Recommended use of the chemical and restrictions on use

Recommended use Industrial use
Laboratory use
Industrial Manufacturing (all)

Restrictions on use No information available

Details of the supplier of the safety data sheet

Supplier Address

Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI 53925 USA
Phone: (920) 623-2140
Fax: (920) 623-2577
www.columbuschemical.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC: 1-800-424-9300 for US / 703-527-3887 outside US

Emergency Telephone 911

2. Hazard(s) identification

Classification

| | |
|-------------------------------------|------------|
| Acute toxicity - Inhalation (Gases) | Category 4 |
| Skin corrosion/irritation | Category 2 |
| Serious eye damage/eye irritation | Category 1 |
| Corrosive to metals | Category 1 |

Hazards not otherwise classified (HNOC)

Not applicable

Label elements**Danger****Hazard statements**

H315 - Causes skin irritation

H318 - Causes serious eye damage

H332 - Harmful if inhaled

H290 - May be corrosive to metals.

**Precautionary Statements - Prevention**

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P271 - Use only outdoors or in a well-ventilated area

P264 - Wash face, hands and any exposed skin thoroughly after handling

P234 - Keep only in original packaging

P280 - Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

P321 - Specific treatment (see First-Aid Measures on SDS)

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

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P332 + P313 - If skin irritation occurs: Get medical advice/attention

P362 - Take off contaminated clothing and wash before reuse

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P312 - Call a POISON CENTER or doctor/physician if you feel unwell

P390 - Absorb spillage to prevent material damage

Precautionary Statements - Storage

P406 - Store in corrosion resistant container with a resistant inner liner

Other information

No information available.

3. Composition/information on ingredients**Mixture**

| Chemical name | CAS No | Weight-% | Formula | Molecular Weight |
|-------------------|-----------|----------|------------------|------------------|
| Hydrochloric acid | 7647-01-0 | 3-4 | HCl | 36.46 g/mol |
| Water | 7732-18-5 | Balance | H ₂ O | 18.02 g/mol |

4. First-aid measures**Description of first aid measures****General advice**

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Inhalation

Remove to fresh air. Get medical attention immediately if symptoms occur. If symptoms

persist, call a physician. If breathing has stopped, give artificial respiration. Get medical attention immediately.

| | |
|---|---|
| Eye contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical attention. |
| Skin contact | Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists. |
| Ingestion | Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get medical attention. |
| Self-protection of the first aider | Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid breathing vapors or mists. Use personal protective equipment as required. See section 8 for more information. |

Most important symptoms and effects, both acute and delayed

Symptoms Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-fighting measures

| | |
|---|--|
| Suitable Extinguishing Media | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Large Fire | CAUTION: Use of water spray when fighting fire may be inefficient. |
| Unsuitable extinguishing media | Do not scatter spilled material with high pressure water streams. |
| Specific hazards arising from the chemical | Hydrogen chloride. |
| Explosion data | |
| Sensitivity to mechanical impact | None. |
| Sensitivity to static discharge | None. |
| Special protective equipment and precautions for fire-fighters | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. |

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

| | |
|-----------------------------|---|
| Personal precautions | Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Avoid breathing vapors or mists. |
| Other information | Refer to protective measures listed in Sections 7 and 8. |

Methods and material for containment and cleaning up

| | |
|--------------------------------|---|
| Methods for containment | Prevent further leakage or spillage if safe to do so. |
|--------------------------------|---|

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.

8. Exposure controls/personal protection

Control parameters

Exposure Limits

| Chemical name | ACGIH TLV | OSHA PEL | NIOSH |
|-------------------|----------------|--|--|
| Hydrochloric acid | Ceiling: 2 ppm | (vacated) Ceiling: 5 ppm (vacated) Ceiling: 7 mg/m ³ Ceiling: 5 ppm Ceiling: 7 mg/m ³ | IDLH: 50 ppm Ceiling: 5 ppm Ceiling: 7 mg/m ³ |

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Liquid
Appearance Clear

| | |
|-----------------------|--------------------------|
| Color | Colorless |
| Odor | No information available |
| Odor threshold | No information available |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|--|--------------------|-------------------------|
| pH | No data available | None known |
| pH (as aqueous solution) | No data available | None known |
| Melting point / freezing point | No data available | None known |
| Initial boiling point and boiling range | No data available | None known |
| Flash point | No data available | None known |
| Evaporation rate | No data available | None known |
| Flammability | No data available | None known |
| Flammability Limit in Air | | None known |
| Upper flammability or explosive limits | No data available | |
| Lower flammability or explosive limits | No data available | |
| Vapor pressure | No data available | None known |
| Relative vapor density | No data available | None known |
| Relative density | 1.0100 - 1.0200 | None known |
| Water solubility | Soluble in water | None known |
| Solubility(ies) | Soluble in alcohol | None known |
| Partition coefficient | No data available | None known |
| Autoignition temperature | No data available | None known |
| Decomposition temperature | | None known |
| Kinematic viscosity | No data available | None known |
| Dynamic viscosity | No data available | None known |

| | | |
|---------------------------------|--------------------------|--|
| <u>Other information</u> | | |
| Explosive properties | No information available | |
| Oxidizing properties | No information available | |
| Softening point | No information available | |
| Molecular weight | No information available | |
| VOC content | No information available | |
| Liquid Density | No information available | |
| Bulk density | No information available | |

10. Stability and reactivity

| | |
|---|---|
| Reactivity | No information available. |
| Chemical stability | Stable under normal conditions. |
| Possibility of hazardous reactions | None under normal processing. |
| Conditions to avoid | Exposure to air or moisture over prolonged periods. Excessive heat. |
| Incompatible materials | Oxidizing agent. Strong acids. Strong bases. |
| Hazardous decomposition products | Hydrogen chloride. |

11. Toxicological information

Information on likely routes of exposure

Product Information

| | |
|---------------------|--|
| Inhalation | Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. Harmful by inhalation. (based on components). |
| Eye contact | Specific test data for the substance or mixture is not available. Causes serious eye damage. May cause irreversible damage to eyes. |
| Skin contact | Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components). |
| Ingestion | Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. |

Symptoms related to the physical, chemical and toxicological characteristics

| | |
|-----------------|--|
| Symptoms | Redness. Burning. May cause blindness. May cause redness and tearing of the eyes. Coughing and/ or wheezing. |
|-----------------|--|

Acute toxicity

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

| | |
|--------------------------------------|------------------|
| ATEmix (oral) | 5,950.00 mg/kg |
| ATEmix (dermal) | 125,250.00 mg/kg |
| ATEmix (inhalation-gas) | 14,082.5550 ppm |
| ATEmix (inhalation-vapor) | 99,999.00 mg/l |
| ATEmix (inhalation-dust/mist) | 12.525 mg/l |

Component Information

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|-------------------|-------------------------|-------------------------|-------------------------|
| Water | >90 ml/kg (Rat) | - | - |
| Hydrochloric acid | 238 - 277 mg/kg (Rat) | > 5010 mg/kg (Rabbit) | = 1.68 mg/L (Rat) 1 h |

Delayed and immediate effects as well as chronic effects from short and long-term exposure

| | |
|--|--|
| Skin corrosion/irritation | May cause skin irritation. Classification based on data available for ingredients. Causes skin irritation. |
| Serious eye damage/eye irritation | Classification based on data available for ingredients. Causes burns. Causes serious eye damage. |
| Respiratory or skin sensitization | No information available. |
| Germ cell mutagenicity | No information available. |
| Carcinogenicity | No information available. |

The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Chemical name | ACGIH | IARC | NTP | OSHA |
|-------------------|-------|---------|-----|------|
| Hydrochloric acid | - | Group 3 | - | - |

Legend

IARC (International Agency for Research on Cancer)

Group 3 - Not Classifiable as to Carcinogenicity in Humans

| | |
|---------------------------------|---------------------------|
| Reproductive toxicity | No information available. |
| STOT - single exposure | No information available. |
| STOT - repeated exposure | No information available. |

| | |
|------------------------------|---------------------------------|
| Target organ effects | Respiratory system, Eyes, Skin. |
| Aspiration hazard | No information available. |
| Other adverse effects | No information available. |
| Interactive effects | No information available. |

12. Ecological information

Ecotoxicity The environmental impact of this product has not been fully investigated.

| Chemical name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|-------------------|----------------------|--|----------------------------|-----------|
| Hydrochloric acid | - | LC50: 282 mg/L (96h, <i>Gambusia affinis</i>) | - | - |

| | |
|--------------------------------------|------------------------------------|
| Persistence and degradability | No information available. |
| Bioaccumulation | There is no data for this product. |
| Other adverse effects | No information available. |

13. Disposal considerations

Disposal methods

| | |
|--|---|
| Waste from residues/unused products | Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. |
| Contaminated packaging | Do not reuse empty containers. Dispose of contents/containers in accordance with local regulations. |

14. Transport information

| | |
|----------------------------|-------------------|
| <u>DOT</u> | Regulated |
| UN number or ID number | UN1789 |
| Proper shipping name | Hydrochloric acid |
| Transport hazard class(es) | 8 |
| Packing group | II |
| DOT Marine Pollutant | No |

| | |
|----------------------------|-------------------|
| <u>TDG</u> | Regulated |
| UN number or ID number | UN1789 |
| UN proper shipping name | Hydrochloric acid |
| Transport hazard class(es) | 8 |
| Packing group | II |

| | |
|----------------------------|-------------------|
| <u>ICAO (air)</u> | Regulated |
| UN number or ID number | UN1789 |
| UN proper shipping name | Hydrochloric acid |
| Transport hazard class(es) | 8 |
| Packing group | II |

| | |
|----------------------------|-------------------|
| <u>IATA</u> | Regulated |
| UN number or ID number | UN1789 |
| UN proper shipping name | Hydrochloric acid |
| Transport hazard class(es) | 8 |
| Packing group | II |

| | |
|----------------------------|-------------------|
| <u>IMDG</u> | Regulated |
| UN number or ID number | UN1789 |
| UN proper shipping name | Hydrochloric acid |
| Transport hazard class(es) | 8 |
| Packing group | II |

15. Regulatory information

International Inventories

| | |
|----------------------|---|
| TSCA | Complies. |
| DSL/NDL | Complies. |
| EINECS/ELINCS | Contact supplier for inventory compliance status. |
| ENCS | Contact supplier for inventory compliance status. |
| IECSC | Contact supplier for inventory compliance status. |
| KECL | Contact supplier for inventory compliance status. |
| PICCS | Contact supplier for inventory compliance status. |
| AIIC | Contact supplier for inventory compliance status. |
| NZIoC | Contact supplier for inventory compliance status. |

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - 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

NZIoC - New Zealand Inventory of Chemicals

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 |

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

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 | 5000 lb | - | - | X |

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 | Extremely Hazardous Substances RQs | Reportable Quantity (RQ) |
|-------------------|--------------------------|------------------------------------|--|
| Hydrochloric acid | 5000 lb | 5000 lb | RQ 5000 lb final RQ RQ 2270 kg final RQ |

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

| Chemical name | New Jersey | Massachusetts | Pennsylvania |
|-------------------|------------|---------------|--------------|
| Hydrochloric acid | X | X | X |

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

| | | | | |
|-------------|-------------------------|-----------------------|---------------------------|------------------------------|
| NFPA | Health hazards 3 | Flammability 0 | Instability 0 | Special hazards - |
| HMIS | Health hazards 3 | Flammability 0 | Physical hazards 0 | Personal protection X |

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

| | | | |
|---------|-----------------------------|------|----------------------------------|
| TWA | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value | * | Skin designation |

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 National Institute of Technology and Evaluation (NITE)
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

Revision date 29-Oct-2025

Revision Note No information available.

Disclaimer

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.

End of Safety Data Sheet