

Safety Data Sheet

HYDROCHLORIC ACID (HCl), 2N**EFFECTIVE DATE: 2015-05-05**

1 Product and Company Identification

- 1.1 Product Name:** Hydrochloric Acid (HCl), 2N
- 1.2 Catalog Number:** 01704
- 1.3 Product Use:** Laboratory Chemical
- 1.4 Manufacturer/Supplier:** STEMCELL Technologies
Suite 500-1618 Station Street
Vancouver, British Columbia V6A 1B6 Canada
- 1.5 In Case of Emergency Call:** 1-800-667-0322

2 Hazards Identification

2.1 Classification of the substance or mixture

Corrosive to metals (Category 1)
Skin corrosion (Category 1B)
Serious eye damage (Category 1)

2.2 Label elements

Pictogram



Signal word Danger

Hazard statement(s)

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.

Precautionary statement(s)

P234 Keep only in original container.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+330+331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+361+353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338 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.
P390 Absorb spillage to prevent material damage.

2.3 Other hazards No data available

Safety Data Sheet**HYDROCHLORIC ACID (HCl), 2N****EFFECTIVE DATE: 2015-05-05****3 Composition / Information on Ingredients****3.1 Substances**

Synonyms	Hydrochloric acid solution, hydrogen chloride
Molecular formula	HCl
Molecular weight	36.46 g/mol

Hazardous Components (Chemical Name)	CAS #	Concentration	EC #
hydrogen chloride	7647-01-0	7.29%	231-595-7

4 First Aid Measures**4.1 Description of first aid measures****4.1.1 If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

4.1.2 In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

4.1.3 In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

4.1.4 If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in section 2.2 and/or in section 11.

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5 Fire Fighting Measures**5.1 Extinguishing Media****5.1.1 Suitable Extinguishing Media**

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

5.1.2 Unsuitable Extinguishing Media

No data available

5.2 Special hazards arising from the substance or mixture**5.2.1 Flammable Properties and Hazards**

Not flammable or combustible.

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5.2.2 Flash Pt

No data available

5.2.3 Autoignition Pt

No data available

5.2.4 Explosive Limits

LEL: No data available

UEL: No data available

5.2.5 Hazardous Combustion Products

Hydrogen chloride gas

5.3 Fire Fighting Instructions

As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

6 Accidental Release Measures
6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7 Handling and Storage
7.1 Precautions for safe handling

Avoid inhalation of vapour or mist.

For precautions see section 2.2.

7.2 Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8 Exposure Controls/Personal Protection
8.1 Exposure limits
Components with workplace control parameters

Component	CAS #	Value	Control parameters	Basis
hydrogen chloride	7647-01-0	(c)	2 ppm 3 mg/m ³	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)

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Remarks	Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required			
	C	2 ppm	Canada. British Columbia OEL	
	C	5 ppm 7.5 mg/m ³	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants	
A substance which may not be recirculated in accordance with section 108				
	C	2 ppm	USA. ACGIH Threshold Limit Values (TLV)	
Remarks	Upper Respiratory Tract irritation Not classifiable as a human carcinogen			
	C	5 ppm 7.5 mg/m ³	USA. NIOSH Recommended Exposure Limits	
Often used in an aqueous solution.				
	C	5 ppm 7.5 mg/m ³	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants	
The value in mg/m ³ is approximate. Ceiling limit is to be determined from breathing-zone air samples.				
	C	5 ppm 7.5 mg/m ³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000	
	TWA	5 ppm 8 mg/m ³	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values	
Indicative				
	STEL	10 ppm 15 mg/m ³	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values	
Indicative				

8.2 Engineering controls

Use mechanical exhaust or laboratory fumehood to avoid exposure.

8.3 Personal protective equipment
8.3.1 Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

8.3.2 Skin 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.

Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

8.3.3 Respiratory protection

Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested

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and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

8.3.4 General hygiene considerations

General industrial hygiene practice.

8.3.5 Environmental exposure controls

Do not let product enter drains.

9 Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance	Colourless liquid
Odour	No data available
Odour threshold	No data available
pH	No data available
Melting point/freezing point	No data available
Boiling point/boiling range	No data available
Flash point	Not applicable
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	No data available
Solubility	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available

10 Stability and Reactivity

10.1 Reactivity	No data available
10.2 Chemical stability	Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions	No data available
10.4 Conditions to avoid	No data available
10.5 Incompatible materials	No data available
10.6 Hazardous decomposition products	Hazardous decomposition products formed under fire conditions - Hydrogen chloride gas

11 Toxicological Information

11.1 Acute toxicity

Oral: No data available

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Inhalation: No data available

Dermal: No data available

Other: No data available

11.2 Skin corrosion/irritation

No data available

11.3 Serious eye damage/eye irritation

No data available

11.4 Respiratory and/or skin sensitization

No data available

11.5 Germ cell mutagenicity

No data available

11.6 Carcinogenicity

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Hydrochloric acid)

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.

11.7 Reproductive toxicity

No data available

11.8 Specific target organ toxicity - single exposure

No data available

11.9 Specific target organ toxicity - repeated exposure

No data available

11.10 Aspiration hazard

No data available

11.11 Potential health effects

Inhalation: May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion: May be harmful if swallowed.

Skin: May be harmful if absorbed through skin. Causes skin burns.

Eyes: Causes eye burns.

11.12 Signs and symptoms of exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Stomach - Irregularities - Based on Human Evidence (Sulfuric acid)

11.13 RTECS # No data available

12 Ecological Information**12.1 Toxicity** No data available**12.2 Persistence and degradability** No data available**12.3 Bioaccumulative potential** No data available

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|-----------------------------------|-------------------|
| 12.4 Mobility in soil | No data available |
| 12.5 Other adverse effects | No data available |

13 Disposal Considerations

13.1 Waste disposal method

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.

13.2 Contaminated packaging

Dispose of as unused product.

14 Transport Information

- | | | |
|--|---------|----------------------|
| 14.1 UN number | DOT | 1789 |
| | ADR/RID | 1789 |
| | IMDG | 1789 |
| | IATA | 1789 |
| 14.2 UN proper shipping name | DOT | Hydrochloric acid |
| | ADR/RID | HYDROCHLORIC ACID |
| | IMDG | HYDROCHLORIC ACID |
| | IATA | Hydrochloric acid |
| 14.3 Transport hazard class(es) | DOT | 8 |
| | ADR/RID | 8 |
| | IMDG | 8 |
| | IATA | 8 |
| 14.4 Packing group | DOT | III |
| | ADR/RID | III |
| | IMDG | III |
| | IATA | III |
| 14.5 Environmental hazards | DOT | Marine pollutant: No |
| | ADR/RID | No |
| | IMDG | Marine pollutant: No |
| | IATA | No |
| 14.6 Special precautions | | No data available |

15 Regulatory Information

15.1 USA
SARA 302 Components:

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:

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Component	CAS #	Revision Date
Hydrogen chloride	7647-01-0	1993-04-24

SARA 311/312:

Acute Health Hazard

Massachusetts Right To Know Components

Component	CAS #	Revision Date
Hydrogen chloride	7647-01-0	1993-04-24

Pennsylvania Right To Know Components

Component	CAS #	Revision Date
Hydrogen chloride	7647-01-0	1993-04-24
Water	7732-18-5	

New Jersey Right To Know Components

Component	CAS #	Revision Date
Hydrogen chloride	7647-01-0	1993-04-24
Water	7732-18-5	

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.

15.2 EU

This SDS was prepared in accordance with Regulation (EC) No.1272/2008 and European Directive 67/548/EEC as amended.

15.3 Canada

WHMIS Classification: E Corrosive Material

This SDS was prepared in accordance with Hazardous Products Regulations (HPR) and WHMIS 2015.

16 Other Information

16.1 Prepared by: Quality Control, STEMCELL Technologies Inc.

16.2 Revision: N/A

16.3 Notice: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. STEMCELL Technologies Inc. shall not be held liable for any damage resulting from handling or from contact with the product. The information contained in this Safety Data Sheet (SDS) is current as of the Effective Date shown in this document and may be subject to amendment by STEMCELL Technologies Inc.

16.4 Disclaimer: **THIS PRODUCT IS FOR RESEARCH USE ONLY. NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES.**