SAFETY DATA SHEET

[Required under safety and health regulations for shipping and handling]

Version: 2019
Date Updated: April 24, 2019

SECTION 1. - - - - - - - - - PRODUCT AND COMPANY IDENTIFICATION- - - - - - - - - -

Product Name	Hydrochloric Acid
Product Code(s)	HC6025
Recommended Use	For Laboratory Research Use Only Not for Human or Animal Drug Use
Supplier	Bio Basic Inc.
Address	20 Konrad Crescent, Markham, Ontario, Canada, L3R 8T4
Telephone	(905) 474 4493
Fax	(905) 474 5794
For Chemical Emergency Phone#	(416) 995 9730

SECTION 2. - - - - - - - - - - HAZARDS IDENTIFICATION - - - - - - - - -

Classification

Corrosive to metals - Category 1; Acute toxicity (Oral) - Category 4; Skin corrosion - Category 1; Serious eye damage - Category 1; Specific target organ toxicity (single exposure) - Category 3

Label Elements

Signal Word: Danger

Hazard Statement(s):

May be corrosive to metals. Harmful if swallowed.
Causes severe skin burns and eye damage. May cause respiratory irritation.

Precautionary Statement(s):

Prevention:

Keep only in original container.
Avoid breathing dust/fume/gas/mist/vapours/spray. Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection. Do not eat, drink or smoke when using this product.

Response:

Absorb spillage to prevent material damage.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTRE or doctor.

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

Disposal:

Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards

None known.

SECTION 3. - - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - - -

Chemical Name	EC No.	CAS-No	Weight %
Hydrochloric acid	231-595-7	7647-01-0	36.5 - 37

SECTION 4. - - - - - - - - - - FIRST-AID MEASURES- - - - - - - - - - -

First-aid Measures

Inhalation

Move to fresh air. Immediately call a Poison Centre or doctor. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor. If breathing has stopped, trained personnel should begin rescue breathing. Avoid mouth-to-mouth contact by using a barrier device.

Skin Contact

Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Immediately call a Poison Centre or doctor. Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely.

Eye Contact

Immediately flush with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Remove contact lenses, if present and easy to do. Immediately call a Poison Centre or doctor. In case of irritation from airborne exposure, move to fresh air.

Ingestion

Immediately call a Poison Centre or doctor. Do not induce vomiting. If vomiting occurs naturally, lie on your side in the recovery position. Rinse mouth with water again.

First-aid Comments

Get medical advice or attention if you feel unwell or are concerned.

Most Important Symptoms and Effects, Acute and Delayed

Causes severe skin and eye burns. Harmful if swallowed. Treat symptomatically. Symptoms may be delayed.

Immediate Medical Attention and Special

Treatment Target Organs

Respiratory system.

Special Instructions

Symptoms of pulmonary edema can be delayed up to 48 hours after exposure.

SECTION 5. - - - - - - - - - FIRE FIGHTING MEASURES - - - - - - - - - -

Extinguishing Media

Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Product

Heating increases the release of toxic vapour.

In a fire, the following hazardous materials may be generated: corrosive hydrogen chloride; corrosive chlorine; flammable hydrogen.

Special Protective Equipment and Precautions for Fire-fighters

Procédures spéciales de lutte contre l'incendie:
Éloigner les récipients de l'incendie si cela n'entraîne pas de risque. Garder au frais les récipients exposés à l'incendie à l'aide d'un jet d'eau.
Mesures de protection:
Les pompiers doivent porter un équipement de protection standard, notamment vêtement ignifuge, casque à masque facial, gants, bottes en caoutchouc et, dans les espaces clos, un appareil respiratoire autonome.
Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.

SECTION 6. - - - - - - - - ACCIDENTAL RELEASE MEASURES- - - - - - - - -

Personal Precautions, Protective Equipment, and Emergency Procedures

Do not touch damaged containers or spilled product unless wearing appropriate protective equipment. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Use the personal protective equipment recommended in Section 8 of this safety data sheet.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up

Neutralize with lime or soda ash. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Dike far ahead of larger spill for later recovery and disposal.

Other Information

Report spills to local health, safety and environmental authorities, as required.

SECTION 7. - - - - - - - - - - HANDLING AND STORAGE- - - - - - - - - - -

Precautions for Safe Handling

Do NOT eat, drink or store food in work areas. Do not get in eyes, on skin or on clothing. Do not breathe in this product. Wash hands thoroughly after handling this material. Never add water to a corrosive. Always add corrosives slowly to COLD water.

Conditions for Safe Storage

Store in an area that is: well-ventilated. Store in the original, labelled, shipping container. Keep container tightly closed. Unsuitable containers: metals.

SECTION 8. - - - - - EXPOSURE CONTROLS/PERSONAL PROTECTION- - - - -

Control Parameters

	ACGIH TLV®		OSHA PEL		AIHA WEEL	
Chemical Name	**TWA**	**STEL**	**TWA**	**Ceiling**	**8-hr TWA**	**TWA**
Hydrochloric acid				2 ppm		

Appropriate Engineering Controls

General ventilation is usually adequate. Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Provide eyewash and safety shower if contact or splash hazard exists.

Individual Protection

Measures Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.
Butyl rubber, neoprene rubber, Viton®.

Respiratory Protection

Wear a NIOSH approved air-purifying respirator with an appropriate cartridge, or, wear a NIOSH approved

self-contained breathing apparatus (SCBA) or supplied air respirator.

SECTION 9. - - - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - - - -

Basic Physical and Chemical Properties

Appearance	Colourless.
Odour	Pungent
Odour Threshold	Not available
pH	0.1 (1 N solution)
Melting Point/Freezing Point	-35 ºC (-31 ºF) (melting); -35 ºC (-31 ºF) (freezing)
Initial Boiling Point/Range	48 ºC (118 ºF)
Flash Point	Not applicable
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable
Upper/Lower Flammability or Explosive Limit	Not applicable (upper); Not applicable (lower)
Vapour Pressure	14.1 kPa
Vapour Density (air = 1)	1.3
Relative Density (water = 1)	1.18 at 20 ºC
Solubility	Soluble in all proportions in water; Highly soluble in alcohols (e.g. ethanol).
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not applicable
Decomposition Temperature	Not available
Viscosity	Not available (kinematic); Not available (dynamic)

Other Information

Physical State	Liquid
Molecular Formula	HCl
Molecular Weight	36.45

SECTION 10. - - - - - - - - -STABILITY AND REACTIVITY - - - - - - - - -

Reactivity

Reacts violently with strong alkaline substances.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

Hazardous polymerization does not occur.

Conditions to Avoid

High temperatures.

Incompatible Materials

Amines (e.g. triethylamine), metals (e.g. aluminum), oxidizing agents (e.g. peroxides), reducing agents (e.g. hydroquinone).
Corrosive to: aluminum alloys, carbon steel, stainless steel.

Hazardous Decomposition Products

Corrosive chlorine; corrosive hydrogen chloride. by heating and fire, corrosive vapours/gases may be formed.

SECTION 11. - - - - - - - - - TOXICOLOGICAL INFORMATION - - - - - - - -

Likely Routes of Exposure

Ingestion; inhalation; skin contact; eye contact.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Hydrochloric acid	1108 ppm (mouse) (1-hour exposure)		

Skin Corrosion/Irritation

Causes severe skin burns.

Serious Eye Damage/Irritation

May irritate or burn the eyes. Permanent damage including blindness may result.

STOT (Specific Target Organ Toxicity) - Single

Exposure Inhalation

At low concentrations causes nose and throat irritation. At high concentrations severe nose and throat irritation. Symptoms may include coughing, shortness of breath, difficult breathing and tightness in the chest. Reactive airways dysfunction syndrome (RADS).

Skin Absorption

Skin absorption is not expected to occur to a significant extent, based on animal information.

Ingestion

Harmful based on human experience and animal tests.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

No information was located.

Respiratory and/or Skin Sensitization

Not a skin sensitizer.

Carcinogenicity

Conclusions cannot be drawn from the limited studies available.

Reproductive Toxicity

Development of

Offspring

Not known to harm the unborn child.

Sexual Function and Fertility

No information was located.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

Not known to be a mutagen.

Interactive Effects

No information was located.

SECTION 12. - - - - - - - - - ECOLOGICAL INFORMATION - - - - - - - - - -

Ecotoxicity

Studies were not located.

Persistence and Degradability

Expected to be readily biodegradable.

Bioaccumulative Potential

No information was located.

Mobility in Soil

If released into the environment, this product can move rapidly through the soil. Contamination of groundwater could occur.

Other Adverse Effects

The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

SECTION 13. - - - - - - - - - DISPOSAL CONSIDERATIONS - - - - - - - - -

Disposal Methods

Dispose of contents and container in accordance with local, regional, national and international regulations. Empty containers retain product residue. Follow label warnings even if container appears to be empty.

SECTION 14. - - - - - - - - - - TRANSPORT INFORMATION - - - - - - - - -

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
Canadian TDG	UN1789	Hydrochloric Acid	8	II
IMO (Marine)	UN1789	Hydrochloric Acid	8	II
IATA (Air)	UN1789	Hydorchloric Acid	8	II

Environmental Hazards Not applicable

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. - - - - - - - - - REGULATORY INFORMATION - - - - - - - - - -

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Listed on the DSL.

CEPA - National Pollutant Release Inventory (NPRI)

Part 1A.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

Listed on the TSCA Inventory.

SECTION 16. - - - - - - - - - - OTHER INFORMATION- - - - - - - - - - -

NFPA Rating **Health - 3** **Flammability - 0** **Instability - 1**

References CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).

Disclaimer Supplier Safety Data Sheets.

Further information: no limited for paper copy, just for internal uses.
For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its

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End of SDS