

## SAFETY DATA SHEET

according to the Global Harmonized System (and with all of the information required by the HPR)

Revision Date 01/17/2019

Version 1.6

### SECTION 1. Identification

#### Product identifier

Product number	HX0603
Product name	Hydrochloric Acid GR ACS

#### Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Reagent for analysis
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#### Details of the supplier of the safety data sheet

Company	Millipore (Canada) Ltd   109 Woodbine Downs Blvd. Unit 5   Etobicoke   Ontario M9W 6Y1   Canada   General Inquiries: +1 800-645-5476   Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5) MilliporeSigma is a business of Merck KGaA, Darmstadt, Germany.
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<b>Emergency telephone</b>	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week
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### SECTION 2. Hazards identification

#### GHS Classification

Corrosive to Metals, Category 1, H290  
Skin corrosion, Category 1B, H314  
Serious eye damage, Category 1, H318  
Specific target organ systemic toxicity - single exposure, Category 3, Respiratory system, H335

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### GHS-Labeling

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## Hazard pictograms



## Signal Word

Danger

## Hazard Statements

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

## Precautionary Statements

P234 Keep only in original container.

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

P264 Wash skin thoroughly after handling.

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

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

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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/doctor.

P321 Specific treatment (see supplemental first aid instructions on this label).

P363 Wash contaminated clothing before reuse.

P390 Absorb spillage to prevent material damage.

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P406 Store in corrosive resistant stainless steel container with a resistant inner liner.

P501 Dispose of contents/ container to an approved waste disposal plant.

## Other hazards

None known.

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## SECTION 3. Composition/information on ingredients

Chemical nature

Aqueous solution

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### **Hazardous ingredients**

*Chemical name (Concentration)*

CAS-No.

*hydrochloric acid (>= 30 % - < 50 % )*

7647-01-0

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## **SECTION 4. First aid measures**

### **Description of first-aid measures**

*General advice*

First aider needs to protect himself.

*Inhalation*

After inhalation: fresh air. Call in physician.

*Skin contact*

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

*Eye contact*

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

*Ingestion*

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation!). Call a physician immediately. Do not attempt to neutralize.

Never give anything by mouth to an unconscious person.

### **Most important symptoms and effects, both acute and delayed**

Irritation and corrosion, Cough, Shortness of breath, cardiovascular disorders, Risk of blindness!

### **Indication of any immediate medical attention and special treatment needed**

No information available.

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## **SECTION 5. Fire-fighting measures**

### **Extinguishing media**

*Suitable extinguishing media*

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

*Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

### **Special hazards arising from the substance or mixture**

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Not combustible.  
Ambient fire may liberate hazardous vapors.  
Fire may cause evolution of:  
Hydrogen chloride gas

### **Advice for firefighters**

*Special protective equipment for fire-fighters*

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

*Further information*

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## **SECTION 6. Accidental release measures**

### **Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

### **Environmental precautions**

Do not let product enter drains.

### **Methods and materials for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills.

Observe possible material restrictions (see sections 7 and 10).

Take up with liquid-absorbent and neutralizing material (e.g. Chemisorb® H<sup>+</sup>, Art. No. 101595). Dispose of properly. Clean up affected area.

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## **SECTION 7. Handling and storage**

### **Precautions for safe handling**

Observe label precautions.

### **Conditions for safe storage, including any incompatibilities**

*Requirements for storage areas and containers*

No metal containers.

Tightly closed.

Store at room temperature.

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## SECTION 8. Exposure controls/personal protection

### Exposure limit(s)

#### Ingredients

Basis	Value	Threshold limits	Remarks
<i>hydrochloric acid 7647-01-0</i>			
CAD AB OEL	Ceiling Limit Value:	2 ppm 3 mg/m <sup>3</sup>	
CAD BC OEL	Ceiling Limit Value:	2 ppm	
CAD MB OEL	Ceiling Limit Value:	2 ppm	
CAD ON OEL	Ceiling Limit Value (CEV):	2 ppm	
OEL (QUE)	Ceiling Limit Value:	5 ppm 7.5 mg/m <sup>3</sup>	

Recirculation prohibited

### Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

### Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

#### Hygiene measures

Immediately change contaminated clothing. Apply skin- protective barrier cream.  
Wash hands and face after working with substance.

#### Eye/face protection

Tightly fitting safety goggles

#### Hand protection

full contact:

Glove material: Nitrile rubber  
Glove thickness: 0.11 mm  
Break through time: > 480 min

splash contact:

Glove material: natural latex  
Glove thickness: 0.6 mm  
Break through time: > 120 min

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The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 706 Lapren® (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

*Other protective equipment:*

Acid-resistant protective clothing.

*Respiratory protection*

required when vapors/aerosols are generated.

Recommended Filter type: filter E-(P2)

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are performed according to the instructions of the producer.

These measures have to be properly documented.

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## SECTION 9. Physical and chemical properties

Physical state	liquid
Color	colorless
Odor	stinging
Odor Threshold	0.8 - 5 ppm Gaseous hydrogen chloride (HCl).
pH	< 1 at 68 °F (20 °C)
Solidification point	-22 °F (-30 °C)
Boiling point	No information available.
Flash point	Not applicable
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.

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Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor pressure	190 hPa at 68 °F (20 °C)
Relative vapor density	No information available.
Density	ca.1.19 g/cm <sup>3</sup> at 68 °F (20 °C)
Relative density	No information available.
Water solubility	at 68 °F (20 °C) soluble
Partition coefficient: n-octanol/water	Not applicable
Autoignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	2.3 mPa.s at 59 °F (15 °C)
Explosive properties	Not classified as explosive.
Oxidizing properties	none
Ignition temperature	Not applicable
Corrosion	May be corrosive to metals.

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### SECTION 10. Stability and reactivity

#### Reactivity

Corrosive in contact with metals

#### Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

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### Possibility of hazardous reactions

Exothermic reaction with:

Amines, potassium permanganate, salts of oxyhalogenic acids, semimetallic oxides, semimetallic hydrogen compounds, Aldehydes, vinylmethyl ether

Risk of ignition or formation of inflammable gases or vapors with:  
carbides, lithium silicide, Fluorine

Generates dangerous gases or fumes in contact with:

Aluminum, hydrides, formaldehyde, Metals, strong alkalis, Sulfides

Risk of explosion with:

Alkali metals, conc. sulfuric acid

### Conditions to avoid

Heating.

### Incompatible materials

Metals, metal alloys

Gives off hydrogen by reaction with metals.

### Hazardous decomposition products

in the event of fire: See section 5.

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## SECTION 11. Toxicological information

### Information on toxicological effects

*Likely route of exposure*

Inhalation, Eye contact, Skin contact

*Acute oral toxicity*

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Acute toxicity estimate: 1,892 mg/kg

Calculation method

*Acute inhalation toxicity*

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Acute toxicity estimate: 6.41 mg/l; 4 h ; vapor

Calculation method

*Skin irritation*

Mixture causes burns.

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## *Eye irritation*

Mixture causes serious eye damage. Risk of blindness!

## *Specific target organ systemic toxicity - single exposure*

May cause respiratory irritation.

Target Organs: Respiratory system

## *Specific target organ systemic toxicity - repeated exposure*

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

## *Aspiration hazard*

Regarding the available data the classification criteria are not fulfilled.

## **Carcinogenicity**

IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

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

ACGIH

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

## **Further information**

After uptake:

After a latency period:

cardiovascular disorders

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

## **Ingredients**

### *hydrochloric acid*

#### *Skin irritation*

Rabbit

Result: Corrosive

OECD Test Guideline 404

#### *Eye irritation*

Rabbit

Result: Irreversible effects on the eye

OECD Test Guideline 405

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*Sensitization*  
Maximization Test Guinea pig  
Result: Does not cause skin sensitization.  
Method: OECD Test Guideline 406

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## SECTION 12. Ecological information

### Ecotoxicity

No information available.

### Persistence and degradability

No information available.

### Bioaccumulative potential

*Partition coefficient: n-octanol/water*

Not applicable

### Mobility in soil

No information available.

### *Additional ecological information*

Forms corrosive mixtures with water even if diluted. Harmful effect due to pH shift.  
Discharge into the environment must be avoided.

### Ingredients

#### *hydrochloric acid*

##### *Toxicity to fish*

Lepomis macrochirus (Bluegill sunfish): 20.5 mg/l; 96 h  
OECD Test Guideline 203

##### *Toxicity to daphnia and other aquatic invertebrates*

EC50: 1.3 mg/l; 48 h  
OECD Test Guideline 202

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

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## SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

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## SECTION 14. Transport information

### Land transport (DOT)

<b>UN number</b>	UN 1789
<b>Proper shipping name</b>	HYDROCHLORIC ACID
<b>Class</b>	8
<b>Packing group</b>	II
<b>Environmentally hazardous</b>	--

### Air transport (IATA)

<b>UN number</b>	UN 1789
<b>Proper shipping name</b>	HYDROCHLORIC ACID
<b>Class</b>	8
<b>Packing group</b>	II
<b>Environmentally hazardous</b>	--
<b>Special precautions for user</b>	no

### Sea transport (IMDG)

<b>UN number</b>	UN 1789
<b>Proper shipping name</b>	HYDROCHLORIC ACID
<b>Class</b>	8
<b>Packing group</b>	II
<b>Environmentally hazardous</b>	--
<b>Special precautions for user</b>	yes
<b>EmS</b>	F-A S-B

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## SECTION 15. Regulatory information

### United States of America

### Canada

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

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## Notification status

TSCA:

All components of the product are listed in the TSCA-inventory.

DSL:

All components of this product are on the Canadian DSL

## SECTION 16. Other information

### Training advice

Provide adequate information, instruction and training for operators.

### Labeling

*Hazard pictograms*



*Signal Word*

Danger

*Hazard Statements*

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

*Precautionary Statements*

Prevention

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

Response

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/physician.

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

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

Revision Date 01/17/2019

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the

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information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact [mlsbranding@sial.com](mailto:mlsbranding@sial.com).

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The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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