

**Hydrochloric acid solution**

84435-1L

Version 2.2

Revision Date 17.12.2022

Supersedes 1

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1. Product identifier**

Product name : Hydrochloric acid solution  
SDS-number : 000000021214  
Type of product : Mixture  
Remarks : SDS according to Art. 31 of Regulation (EC) 1907/2006.

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

Use of the Substance/Mixture : Laboratory chemicals  
Uses advised against : none

**1.3. Details of the supplier of the safety data sheet**

Company	:	Honeywell International Inc. 115 Tabor Road 07950-2546 Morris Plains USA	Honeywell International, Inc. 115 Tabor Road Morris Plains, NJ 07950-2546 USA
Telephone	:		
For further information, please contact:	:	SafetyDataSheet@Honeywell.com	

**1.4. Emergency telephone number**

Emergency telephone number : +1-703-527-3887 (ChemTrec-Transport)  
  : +1-303-389-1414 (Medical)  
Country based Poison Control Center : see chapter 15.1

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**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

REGULATION (EC) No 1272/2008

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Corrosive to metals Category 1  
H290 May be corrosive to metals.  
Skin irritation Category 2  
H315 Causes skin irritation.  
Eye irritation Category 2  
H319 Causes serious eye irritation.  
Specific target organ toxicity - single exposure Category 3 - Respiratory system  
H335 May cause respiratory irritation.

### 2.2. Label elements

#### REGULATION (EC) No 1272/2008

Hazard pictograms



Signal word

: Warning

Hazard statements

: H290 May be corrosive to metals.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.

Precautionary statements

: P234 Keep only in original container.  
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P284 In case of inadequate ventilation wear respiratory protection.  
P302 + P352 IF ON SKIN: Wash with plenty of water.  
P304 + P340 IF INHALED: Remove person to fresh air and keep 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.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.

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Hazardous components : hydrochloric acid  
which must be listed on the  
label

### 2.3. Other hazards

No information available.

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

### 3.2. Mixture

Chemical name	CAS-No. Index-No. REACH Registration Number EC-No.	Classification 1272/2008	Concentration	Remarks
hydrochloric acid	7647-01-0 017-002-01-X 231-595-7	Skin Corr. 1B; H314 STOT SE 3; H335; Respiratory system	>= 10 % - < 20 %	STOT SE 3; H335:>= 10 % Skin Irrit. 2; H315:10 - < 25 % Eye Irrit. 2; H319:10 - < 25 % Skin Corr. 1B; H314:>= 25 %

Remaining components of this product are non-hazardous and/or are present at concentrations below reportable limits.

Occupational Exposure Limit(s), if available, are listed in Section 8.  
For the full text of the H-Statements mentioned in this Section, see Section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

*General advice:*

First aider needs to protect himself. Remove from exposure, lie down. Immediately take off contaminated clothing and rinse body with plenty of water.

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*Inhalation:*

Remove to fresh air. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present. Call a physician immediately.

*Skin contact:*

Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.

*Eye contact:*

Protect unharmed eye. Irrigate eyes for at least 15 minutes with copious quantities of water, keeping eyelids apart and away from eyeballs during irrigation. Call a physician immediately.

*Ingestion:*

Rinse mouth with water. Do NOT induce vomiting. Call a physician immediately.

#### 4.2. Most important symptoms and effects, both acute and delayed

No data available

#### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

See Section 11 for more detailed information on health effects and symptoms.

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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

*Suitable extinguishing media:*

Water spray  
Foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry powder

*Extinguishing media which shall not be used for safety reasons:*

High volume water jet

#### 5.2. Special hazards arising from the substance or mixture

Fire may cause evolution of:  
Gaseous hydrogen chloride (HCl).  
Exposure to decomposition products may be a hazard to health.

#### 5.3. Advice for firefighters

In the event of fire and/or explosion do not breathe fumes.  
Wear self-contained breathing apparatus and protective suit.  
No unprotected exposed skin areas.  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. The product itself does not burn.

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### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

Immediately evacuate personnel to safe areas. Wear personal protective equipment. Unprotected persons must be kept away. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Do not breathe vapours or spray mist.

#### 6.2. Environmental precautions

Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.

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### 6.3. Methods and materials for containment and cleaning up

Rinse away small amounts with water.  
Clean-up methods - large spillage  
Neutralize with lime milk or soda and flush with plenty of water.  
Suppress (knock down) gases/vapours/mists with a water spray jet.

### 6.4. Reference to other sections

For personal protection see section 8.

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## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

*Advice on safe handling:*

Wear personal protective equipment. Use only in well-ventilated areas. Keep container tightly closed. Use only acid resistant equipment. When diluting, always add the product to water. Never add water to the product. Do not breathe vapours or spray mist.

*Advice on protection against fire and explosion:*

Normal measures for preventive fire protection.

*Hygiene measures:*

Separate rooms are required for washing, showering and changing clothes. Keep working clothes separately. Take off all contaminated clothing immediately. Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday. When using do not eat or drink.

### 7.2. Conditions for safe storage, including any incompatibilities

*Further information on storage conditions:*

Store in original container. Keep container tightly closed and in a well-ventilated place. Do not leave vessels/containers open. Containers should be protected against falling down. Avoid product residues in/on containers.

*Advice on common storage:*

Do not store together with: Oxidizing agents alkalines

### 7.3. Specific end use(s)

no additional data available

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### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Occupational exposure limits:

Components	Basis / Value type	Value / Form of exposure	Exceeding Factor	Remarks
hydrochloric acid	EH40 WEL STEL	8 mg/m <sup>3</sup> 5 ppm Gas and aerosol mists.		
hydrochloric acid	EH40 WEL TWA	2 mg/m <sup>3</sup> 1 ppm Gas and aerosol mists.		
hydrochloric acid	EH40 WEL	Gas and aerosol mists.		Listed
hydrochloric acid	EU ELV TWA	8 mg/m <sup>3</sup> 5 ppm		Indicative
hydrochloric acid	EU ELV STEL	15 mg/m <sup>3</sup> 10 ppm		Indicative

STEL - Short term exposure limit  
TWA - Time weighted average

##### DNEL/ PNEC-Values

Component	End-use/impact	Exposure duration	Value	Exposure routes	Remarks
hydrochloric acid	Workers / Acute local effects		15 mg/m <sup>3</sup>	Inhalation	
hydrochloric acid	Workers / Long-term local effects		8 mg/m <sup>3</sup>	Inhalation	
hydrochloric acid	Consumers / Acute local effects		15 mg/m <sup>3</sup>	Inhalation	

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hydrochloric acid	Consumers / Long-term local effects		8 mg/m <sup>3</sup>	Inhalation	
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No PNEC data available.

### 8.2. Exposure controls

#### Occupational exposure controls

The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.

Do not breathe vapours or spray mist.

#### Engineering measures

Use with local exhaust ventilation.

Use only acid resistant equipment.

#### Personal protective equipment

##### *Respiratory protection:*

In the case of vapour formation use a respirator with an approved filter.

##### *Hand protection:*

Glove material: Chloroprene

Break through time: > 480 min

Glove thickness: 0,65 mm

Camapren®720

Gloves must be inspected prior to use.

Replace when worn.

Remarks:Supplementary note: The specifications are based on information and tests from similar substances by analogy.

Due to varying conditions ( e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.

Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer recommends to use the chemical protective glove in practice not longer than 50% of the recommended permeation time.

Manufacturer´s directions for use should be observed because of great diversity of types .

Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de



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*Eye protection:*

Safety goggles

*Skin and body protection:*

Wear suitable protective equipment.

Wear as appropriate:

acid-proof protective clothing

### Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

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## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	:	liquid
Colour	:	colourless
Odour	:	stinging
molecular weight	:	36,46 g/mol
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flammability	:	Not applicable
Upper explosion limit	:	Not applicable
Lower explosion limit	:	Not applicable
Flash point	:	Not applicable
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	No decomposition if used as directed. Fire or intense heat may cause violent rupture of packages.
pH	:	> 0,1

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	at 20 °C
Viscosity, kinematic	: No data available
Water solubility	: completely miscible
Partition coefficient: n-octanol/water	: No data available
Vapour pressure	: No data available
Density	: ca. 1,072 g/cm <sup>3</sup> at 20 °C
Relative vapour density	: No data available

### 9.2 Other Information

Corrosive to metals	: Corrosive to metals
Evaporation rate	: No data available
Viscosity, dynamic	: No data available

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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under normal conditions.

### 10.2. Chemical stability

No decomposition if used as directed.  
Fire or intense heat may cause violent rupture of packages.

### 10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

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### 10.4. Conditions to avoid

Protect from moisture.

### 10.5. Incompatible materials

Gives off hydrogen by reaction with metals.  
Incompatible with strong bases and oxidizing agents.

Ammonia  
Amines

### 10.6. Hazardous decomposition products

Hydrogen, by reaction with metals  
Hydrogen chloride gas

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## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

*Acute oral toxicity:*  
No data available

*Acute dermal toxicity:*  
No data available

*Acute inhalation toxicity:*  
No data available

*Skin irritation:*  
Classification based on Annex VI of regulation 1272/2008/EC.

*Eye irritation:*  
Classification based on Annex VI of regulation 1272/2008/EC.

*Respiratory or skin sensitisation:*  
Species: Guinea pig  
Classification: non-sensitizing  
Method: OECD Test Guideline 406  
Test substance: anhydrous substance

*Repeated dose toxicity:*

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Note: No data available

*Carcinogenicity:*

Note: No data available

*Germ cell mutagenicity:*

Note: No data available

*Reproductive toxicity:*

Remarks: No data available

*Aspiration hazard:*

No data available

### 11.2. Information on other hazards

Endocrine disrupting properties

No data available

*Other information:*

No data available

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## SECTION 12: Ecological information

### 12.1. Toxicity

*Toxicity to fish:*

No data available

*Toxicity to aquatic plants:*

No data available

*Toxicity to aquatic invertebrates:*

No data available

### 12.2. Persistence and degradability

*Biodegradability:*

The methods for determining biodegradability are not applicable to inorganic substances.

### 12.3. Bioaccumulative potential

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No data available

### 12.4. Mobility in soil

No data available

### 12.5. Results of PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating and toxic (PBT).  
This substance is not considered to be very persistent and very bioaccumulating (vPvB).

### 12.6. Endocrine disrupting properties

No data available

### 12.7. Other adverse effects

Neutralisation will reduce ecotoxic effects.

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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

*Product:*

Dispose according to legal requirements.

*Packaging:*

Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

*Further information:*

Provisions relating to waste:  
EC Directive 2006/12/EC; 2008/98/EEC  
Regulation No. 1013/2006

For personal protection see section 8.

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## SECTION 14: Transport information

### 14.1 UN number

ADR/RID:1789

IMDG:1789

IATA:1789

### 14.2 UN proper shipping name

ADR/RID:HYDROCHLORIC ACID  
IMDG:HYDROCHLORIC ACID

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IATA: Hydrochloric acid

**14.3 Transport hazard class(es)**

ADR/RID: 8    IMDG: 8    IATA: 8

**14.4 Packaging group**

ADR/RID: II    IMDG: II    IATA: II

**14.5 Environmental hazards**

ADR/RID: no    Marine pollutant: no

**14.6 Special precautions for user**

IMDG Code segregation group (SGG1) – ACIDS,

**14.7 Maritime transport in bulk according to IMO instruments**

No data available

**SECTION 15: Regulatory information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Basis	Value	Remarks
Directive 2012/18/EC		Not applicable
Substances of very high concern (SVHC)		This product does not contain substances of very high concern according to Regulation (EC) No Article 57 above the respective regulatory 1907/2006 (REACH), concentration limit of ≥ 0.1 % (w/w).

**Poison Control Center**

Country	Phone Number
Austria	+4314064343
Belgium	070 245245
Bulgaria	(+)35929154233

Country	Phone Number
Liechtenstein	+41 442515151
Lithuania	+370532362052
Luxembourg	070245245; (+352)80002-5500

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Croatia	(+3851)23-48-342
Cyprus	+357 2240 5611
Czech Republic	+420224919293; +420224915402
Denmark	82121212
Estonia	16662; (+372)6269390
Finland	9471977
France	+33(0)145425959
Greece	+30 210 779 3777
Hungary	(+36-80)201-199
Iceland	5432222
Ireland	+353(1)8092166
Italy	0382 24444
Germany	Berlin : 030/19240
	Bonn : 0228/19240
	Erfurt : 0361/730730
	Freiburg : 0761/19240
	Göttingen : 0551/19240
	Homburg : 06841/19240
	Mainz : 06131/19240
Munich : 089/19240	
Latvia	+37167042473

Malta	+356 2395 2000
Netherlands	030-2748888
Norway	22591300
Poland	+48 42 25 38 400
Portugal	800250250
Romania	+40 21 318 3606
Slovakia (NTIC)	+421 2 54 774 166
Slovenia	+386 1 400 6051
Spain	+34915620420
Sweden	112 (begär Giftinformation);+46104566786
Switzerland	145
United Kingdom	(+44) 844 892 0111

### Other inventory information

US. Toxic Substances Control Act  
On TSCA Inventory

Australia. Inventory of Industrial Chemicals (AIIC), as amended  
On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)  
All components of this product are on the Canadian DSL

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Japan. Kashin-Hou Law List

On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI)

On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS)

On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC)

On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand

On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory (TCSI)

On the inventory, or in compliance with the inventory

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

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## SECTION 16: Other information

### Text of H-statements referred to under heading 3

hydrochloric acid : H314 Causes severe skin burns and eye damage.  
H335 May cause respiratory irritation.

### Further information

All directives and regulations refer to amended versions.

Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

Abbreviations:

EC European Community

CAS Chemical Abstracts Service

DNEL Derived no effect level

PNEC Predicted no effect level

vPvB Very persistent and very biaccumulative substance



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PBT Persistent, bioaccumulative und toxic substance

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. Final determination of suitability of any material is the sole responsibility of the user.

This information should not constitute a guarantee for any specific product properties.

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