

**Safety Data Sheet**

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878  
Date of issue: 15/12/2014 Revision date: 12/01/2023 Supersedes version of: 05/04/2018 Version: 2.2

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form : Substance  
Trade name : UN1789 Hydrochloric acid, volumetric solution 0.25 M (0.25 N)  
Chemical name : hydrochloric acid ... %  
IUPAC name : hydrogen chloride  
EC Index-No. : 017-002-01-X  
EC-No. : 231-595-7  
REACH registration No : 01-2119484862-27  
Product code : CHAC-25V  
Formula : HCl

**1.2. Relevant identified uses of the substance or mixture and uses advised against****1.2.1. Relevant identified uses**

Main use category : Laboratory use

**1.2.2. Uses advised against**

No additional information available

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

labbox labware s.l.  
Migjorn, 1  
P.O. Box Barcelona (SPAIN)  
08338 Premia de Dalt – SPAIN  
ES  
T +34 937 07 79 70 - F +34 937 909 532  
[info@labbox.com](mailto:info@labbox.com) - [www.labbox.com](http://www.labbox.com)

**1.4. Emergency telephone number**

Emergency number : +34 937 077 970 (For technical information\_Office Hours) In case of medical emergency phone 112 or to your local emergency number.

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA	0344 892 0111	

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Corrosive to metals, Category 1 H290

Full text of H and EUH statements: see section 16

Specific concentration limits:

( 10 ≤C < 100)

( 10 ≤C < 25)

( 10 ≤C < 25)

( 25 ≤C < 100)

STOT SE 3, H335

Eye Irrit. 2, H319

Skin Irrit. 2, H315

Skin Corr. 1B, H314

**Adverse physicochemical, human health and environmental effects**

No additional information available

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### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H290 - May be corrosive to metals.

Precautionary statements (CLP) :

P234 - Keep only in original packaging.

P390 - Absorb spillage to prevent material damage.

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

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Substance type

: Mono-constituent

Name	Product identifier	%
Hydrochloric acid	EC-No.: 231-595-7 EC Index-No.: 017-002-01-X REACH-no: 01-2119484862-27	> 0,1 – < 1

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general

: Get medical advice/attention if you feel unwell.

First-aid measures after inhalation

: Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. If you feel unwell, seek medical advice.

First-aid measures after skin contact

: Wash with plenty of water/.... Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Get medical advice/attention.

First-aid measures after eye contact

: Rinse eyes with water as a precaution. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion

: Rinse mouth. Do not induce vomiting. Call a physician immediately.

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

No additional information available

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

Never give anything by mouth to an unconscious person.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media

: Water spray. Sand. Carbon dioxide. Dry powder.

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

Fire hazard : Non combustible.  
Hazardous decomposition products in case of fire : Corrosive vapours.

### 5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire.  
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

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

General measures : Absorb spillage to prevent material damage.

#### 6.1.1. For non-emergency personnel

No additional information available

#### 6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters.

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

Methods for cleaning up : Take up liquid spill into absorbent material. Collect spillage. This material and its container must be disposed of in a safe way, and as per local legislation.

### 6.4. Reference to other sections

See Heading 8. For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed : May be corrosive to metals.  
Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

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

Storage conditions : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Store in a well-ventilated place. Keep container tightly closed.  
Storage area : Store away from heat. Store in a well-ventilated place.  
Special rules on packaging : Store in a closed container. Keep only in original container.

### 7.3. Specific end use(s)

Laboratory chemicals.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1 National occupational exposure and biological limit values

#### UN1789 Hydrochloric acid, volumetric solution 0.25 M (0.25 N)

#### EU - Indicative Occupational Exposure Limit (IOEL)

Local name	Hydrogen chloride
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IOEL TWA	8 mg/m <sup>3</sup>
IOEL TWA [ppm]	5 ppm
IOEL STEL	15 mg/m <sup>3</sup>
IOEL STEL [ppm]	10 ppm
<b>France - Occupational Exposure Limits</b>	
Local name	Chlorure d'hydrogène (Acide chlorhydrique)
VLE (OEL Ceiling/STEL)	7,6 mg/m <sup>3</sup>
VLE (OEL Ceiling/STEL) [ppm]	5 ppm
Remark	Valeurs réglementaires contraignantes
<b>Germany - Occupational Exposure Limits (TRGS 900)</b>	
Local name	Hydrogenchlorid
AGW (OEL TWA) [1]	3 mg/m <sup>3</sup>
AGW (OEL TWA) [2]	2 ppm
Remark	DFG,EU,Y
<b>Italy - Occupational Exposure Limits</b>	
Local name	Acido cloridrico
OEL TWA	8 mg/m <sup>3</sup>
OEL TWA [ppm]	5 ppm
OEL STEL	15 mg/m <sup>3</sup>
OEL STEL [ppm]	10 ppm
<b>Portugal - Occupational Exposure Limits</b>	
Local name	Ácido clorídrico
OEL Ceiling [ppm]	2 ppm
<b>Spain - Occupational Exposure Limits</b>	
Local name	Cloruro de hidrógeno
VLA-ED (OEL TWA) [1]	7,6 mg/m <sup>3</sup>
VLA-ED (OEL TWA) [2]	5 ppm
VLA-EC (OEL STEL)	15 mg/m <sup>3</sup>
VLA-EC (OEL STEL) [ppm]	10 ppm
Remark	VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo. Todos estos agentes químicos figuran al menos en una de las directivas de valores límite indicativos publicadas hasta ahora (ver Anexo C. Bibliografía). Los estados miembros disponen de un tiempo fijado en dichas directivas para su transposición a los valores límites de cada país miembro. Una vez adoptados, estos valores tienen la misma validez que el resto de los valores adoptados por el país).
<b>United Kingdom - Occupational Exposure Limits</b>	
Local name	Hydrogen chloride
WEL TWA [1]	2 mg/m <sup>3</sup> gas and aerosol mists
WEL TWA [2]	1 ppm gas and aerosol mists
WEL STEL	8 mg/m <sup>3</sup> gas and aerosol mists
WEL STEL (ppm)	5 ppm gas and aerosol mists

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### 8.1.2. Recommended monitoring procedures

No additional information available

### 8.1.3. Air contaminants formed

No additional information available

### 8.1.4. DNEL and PNEC

UN1789 Hydrochloric acid, volumetric solution 0.25 M (0.25 N)	
<b>DNEL/DMEL (Workers)</b>	
Acute - local effects, inhalation	15 mg/m <sup>3</sup>
Long-term - local effects, inhalation	8 mg/m <sup>3</sup>
<b>PNEC (Water)</b>	
PNEC aqua (freshwater)	36 µg/l
PNEC aqua (marine water)	36 µg/l
PNEC aqua (intermittent, freshwater)	45 µg/l
<b>PNEC (STP)</b>	
PNEC sewage treatment plant	36 µg/l

### 8.1.5. Control banding

No additional information available

## 8.2. Exposure controls

### 8.2.1. Appropriate engineering controls

No additional information available

### 8.2.2. Personal protection equipment

#### Personal protective equipment:

Avoid all unnecessary exposure. EN 374.

#### Personal protective equipment symbol(s):



#### 8.2.2.1. Eye and face protection

##### Eye protection:

Safety glasses

#### 8.2.2.2. Skin protection

##### Skin and body protection:

Wear suitable protective clothing

##### Hand protection:

Protective gloves against chemicals (EN 374)

#### 8.2.2.3. Respiratory protection

##### Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

Respiratory protection			
Device	Filter type	Condition	Standard
	Type E - Sulfur dioxide and hydrogen chloride (acidic gases)		

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### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

No additional information available

## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Colour	: Colourless.
Molecular mass	: 36,46 g/mol
Odour	: strong.
Odour threshold	: Not available
Melting point	: -114,22 °C
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not available
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: < 1
Viscosity, kinematic	: Not available
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: Not available
Relative density	: 1,01
Relative vapour density at 20 °C	: Not available
Particle characteristics	: Not applicable

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable in use and storage conditions as recommended in item 7.

### 10.2. Chemical stability

Stable under normal conditions of use.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Overheating. Water, humidity.

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### 10.5. Incompatible materials

Metals.

### 10.6. Hazardous decomposition products

Corrosive vapours.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Not classified

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LD50 oral rat	8,3 mg/l
Skin corrosion/irritation	: Not classified pH: < 1
Serious eye damage/irritation	: Not classified pH: < 1
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

### 11.2. Information on other hazards

No additional information available

## SECTION 12: Ecological information

### 12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified  
Hazardous to the aquatic environment, long-term (chronic) : Not classified

#### UN1789 Hydrochloric acid, volumetric solution 0.25 M (0.25 N)

LC50 - Fish [1]	20,5 mg/kg
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### 12.2. Persistence and degradability

#### UN1789 Hydrochloric acid, volumetric solution 0.25 M (0.25 N)

Persistence and degradability	Readily biodegradable.
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### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

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### 12.6. Endocrine disrupting properties

No additional information available

### 12.7. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Regional legislation (waste) : Disposal must be done according to official regulations.  
Waste treatment methods : Must follow special treatment according to local regulation.

## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

### 14.1. UN number or ID number

UN-No. (ADR) : UN 1789  
UN-No. (IMDG) : UN 1789  
UN-No. (IATA) : UN 1789  
UN-No. (ADN) : UN 1789  
UN-No. (RID) : UN 1789

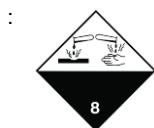
### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : HYDROCHLORIC ACID  
Proper Shipping Name (IMDG) : HYDROCHLORIC ACID  
Proper Shipping Name (IATA) : Hydrochloric acid  
Proper Shipping Name (ADN) : HYDROCHLORIC ACID  
Proper Shipping Name (RID) : HYDROCHLORIC ACID  
Transport document description (ADR) : UN 1789 HYDROCHLORIC ACID, 8, III, (E)  
Transport document description (IMDG) : UN 1789 HYDROCHLORIC ACID, 8, III  
Transport document description (IATA) : UN 1789 Hydrochloric acid, 8, III  
Transport document description (ADN) : UN 1789 HYDROCHLORIC ACID, 8, III  
Transport document description (RID) : UN 1789 HYDROCHLORIC ACID, 8, III

### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR) : 8  
Danger labels (ADR) : 8



#### IMDG

Transport hazard class(es) (IMDG) : 8  
Danger labels (IMDG) : 8



#### IATA

Transport hazard class(es) (IATA) : 8  
Danger labels (IATA) : 8



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### ADN

Transport hazard class(es) (ADN) : 8  
Danger labels (ADN) : 8



### RID

Transport hazard class(es) (RID) : 8  
Danger labels (RID) : 8



## 14.4. Packing group

Packing group (ADR) : III  
Packing group (IMDG) : III  
Packing group (IATA) : III  
Packing group (ADN) : III  
Packing group (RID) : III

## 14.5. Environmental hazards

Dangerous for the environment : No  
Marine pollutant : No  
Other information : No supplementary information available

## 14.6. Special precautions for user

### Overland transport

Classification code (ADR) : C1  
Special provisions (ADR) : 520  
Limited quantities (ADR) : 1I  
Excepted quantities (ADR) : E2  
Packing instructions (ADR) : P001, IBC02  
Mixed packing provisions (ADR) : MP15  
Portable tank and bulk container instructions (ADR) : T8  
Portable tank and bulk container special provisions (ADR) : TP2  
Tank code (ADR) : L4BN  
Vehicle for tank carriage : AT  
Transport category (ADR) : 2  
Hazard identification number (Kemler No.) : 80  
Orange plates :



Tunnel restriction code (ADR) : E  
EAC code : 2R

### Transport by sea

Limited quantities (IMDG) : 1 L  
Excepted quantities (IMDG) : E2

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Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
IBC special provisions (IMDG)	: B20
Tank instructions (IMDG)	: T8
Tank special provisions (IMDG)	: TP2
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-B
Stowage category (IMDG)	: C
Properties and observations (IMDG)	: Colourless liquid. An aqueous solution of the gas hydrogen chloride. Highly corrosive to most metals. Causes burns to skin, eyes and mucous membranes.

### Air transport

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y840
PCA limited quantity max net quantity (IATA)	: 0.5L
PCA packing instructions (IATA)	: 851
PCA max net quantity (IATA)	: 1L
CAO packing instructions (IATA)	: 855
CAO max net quantity (IATA)	: 30L
Special provisions (IATA)	: A3
ERG code (IATA)	: 8L

### Inland waterway transport

Classification code (ADN)	: C1
Special provisions (ADN)	: 520
Limited quantities (ADN)	: 1 L
Excepted quantities (ADN)	: E2
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EP
Number of blue cones/lights (ADN)	: 0

### Rail transport

Classification code (RID)	: C1
Special provisions (RID)	: 520
Limited quantities (RID)	: 1L
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P001, IBC02
Mixed packing provisions (RID)	: MP15
Portable tank and bulk container instructions (RID)	: T8
Portable tank and bulk container special provisions (RID)	: TP2
Tank codes for RID tanks (RID)	: L4BN
Transport category (RID)	: 2
Colis express (express parcels) (RID)	: CE6
Hazard identification number (RID)	: 80

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

##### REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)	
Reference code	Applicable on
3.	UN1789 Hydrochloric acid, volumetric solution 0.25 M (0.25 N)

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### EU restriction list (REACH Annex XVII)

Reference code	Applicable on
3(b)	UN1789 Hydrochloric acid, volumetric solution 0.25 M (0.25 N)

### REACH Annex XIV (Authorisation List)

UN1789 Hydrochloric acid, volumetric solution 0.25 M (0.25 N) is not on the REACH Annex XIV List

### REACH Candidate List (SVHC)

UN1789 Hydrochloric acid, volumetric solution 0.25 M (0.25 N) is not on the REACH Candidate List

### PIC Regulation (Prior Informed Consent)

UN1789 Hydrochloric acid, volumetric solution 0.25 M (0.25 N) is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

### POP Regulation (Persistent Organic Pollutants)

UN1789 Hydrochloric acid, volumetric solution 0.25 M (0.25 N) is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

### Ozone Regulation (1005/2009)

Hydrochloric acid is not subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

### Explosives Precursors Regulation (2019/1148)

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

### Drug Precursors Regulation (273/2004)

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

### 15.1.2. National regulations

#### France

Occupational diseases	
Code	Description
RG 66	Occupational rhinitis and asthma

#### Germany

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to VwVwS, Annex 1 or 2; ID No. 238).

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

#### Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting : The substance is not listed

giftige stoffen – Borstvoeding

NIET-limitatieve lijst van voor de voortplanting : The substance is not listed

giftige stoffen – Vruchtbaarheid

NIET-limitatieve lijst van voor de voortplanting : The substance is not listed

giftige stoffen – Ontwikkeling

#### Denmark

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

### 15.2. Chemical safety assessment

No additional information available

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### SECTION 16: Other information

#### Full text of H- and EUH-statements:

Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.