



**Safety Data Sheet dated 10/2/2020, version 11**

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

### 1.1. Product identifier

Trade name: CHLORIDRIC ACID IN SOLUTION  
Chemical name: HYDROCHLORIC ACID 25-37%  
EC number: 231-595-7  
Index number: 017-002-01-X  
REACH number: 01-2119484862-27-0114

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

Recommended use:  
FOR INDUSTRIAL USE  
FOOD ADDITIVE  
FOR PROFESSIONAL USE

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

Company:  
ALTAIR CHIMICA S.p.a.  
Via Moie Vecchie 13  
56048 Saline di Volterra (PI)  
Competent person responsible for the safety data sheet: [sds@altairchimica.com](mailto:sds@altairchimica.com)

### 1.4. Emergency telephone number

ALTAIR CHIMICA S.p.a. Phone n. +39-0588-9811

## **SECTION 2: Hazards identification**

### 2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)

- ⚠ Warning, Met. Corr. 1, May be corrosive to metals.
- ⚠ Danger, Eye Dam. 1, Causes serious eye damage.
- ⚠ Danger, Skin Corr. 1B, Causes severe skin burns and eye damage.
- ⚠ Warning, STOT SE 3, May cause respiratory irritation.

Adverse physicochemical, human health and environmental effects:

No other hazards

### 2.2. Label elements

Hazard pictograms:



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 packaging.  
P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
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.  
P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:

None

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

### 2.3. Other hazards

vPvB Substances: None - PBT Substances: None

Other Hazards:

No other hazards

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Trade name: CHLORIDRIC ACID IN SOLUTION  
 Chemical name: HYDROCHLORIC ACID 25-37%  
 EC number: 231-595-7  
 REACH number: 01-2119484862-27-0114

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Number	Classification
>= 90%	hydrochloric acid 25-37%	Index number: 017-002-01-X EC: 231-595-7 REACH No.: 01-2119484862-27-0114	⚠ 2.16/1 Met. Corr. 1 H290 ⚠ 3.2/1B Skin Corr. 1B H314 ⚠ 3.3/1 Eye Dam. 1 H318 ⚠ 3.8/3 STOT SE 3 H335

### 3.2. Mixtures

N.A.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

In case of inhalation, consult a doctor immediately and show him packing or label.

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

Pulmonary oedema

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO2).

Extinguishing media which must not be used for safety reasons:

None in particular.

- 5.2. Special hazards arising from the substance or mixture  
Do not inhale explosion and combustion gases.
- 5.3. Advice for firefighters  
Use suitable breathing apparatus .  
Move undamaged containers from immediate hazard area if it can be done safely.  
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

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### SECTION 6: Accidental release measures

- 6.1. Personal precautions, protective equipment and emergency procedures  
Wear personal protection equipment.  
Wear breathing apparatus if exposed to vapours/dusts/aerosols.  
Provide adequate ventilation.  
Use appropriate respiratory protection.  
See protective measures under point 7 and 8.
- 6.2. Environmental precautions  
Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.  
Retain contaminated washing water and dispose it.  
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.  
Suitable material for taking up: absorbing material, organic, sand
- 6.3. Methods and material for containment and cleaning up  
After the product has been recovered, rinse the area and materials involved with water.  
Wash with plenty of water.
- 6.4. Reference to other sections  
See also section 8 and 13

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### SECTION 7: Handling and storage

- 7.1. Precautions for safe handling  
Avoid contact with skin and eyes, inhalation of vapours and mists.  
Use localized ventilation system.  
Don't use empty container before they have been cleaned.  
Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.  
See also section 8 for recommended protective equipment.  
Advice on general occupational hygiene:  
Contaminated clothing should be changed before entering eating areas.  
Do not eat or drink while working.
- 7.2. Conditions for safe storage, including any incompatibilities  
Do not pour the product into other containers. Always use the original container.  
Keep away from food, drink and feed.  
Incompatible materials:  
None in particular.  
Keep away from oxidizing agents  
Instructions as regards storage premises:  
Adequately ventilated premises.
- 7.3. Specific end use(s)  
None in particular

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### SECTION 8: Exposure controls/personal protection

- 8.1. Control parameters  
CHLORIDRIC ACID IN SOLUTION - Index number: 017-002-01-X  
EU - TWA: 5 mg/m<sup>3</sup>, 8 ppm - STEL: 15 mg/m<sup>3</sup>, 10 ppm

### DNEL Exposure Limit Values

CHLORIDRIC ACID IN SOLUTION - Index number: 017-002-01-X

Worker Industry: 15 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, local effects

Worker Industry: 8 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, local effects

### PNEC Exposure Limit Values

CHLORIDRIC ACID IN SOLUTION - Index number: 017-002-01-X

Target: Fresh Water - Value: 0.0036 mg/l

Target: Marine water - Value: 0.0036 mg/l

Target: Microorganisms in sewage treatments - Value: 0.0036 mg/l

### 8.2. Exposure controls

#### Eye protection:

Eye glasses with side protection.

#### Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

#### Protection for hands:

Suitable material:

NBR (nitrile rubber).

Butyl caoutchouc (butyl rubber).

UNI EN 420/UNI EN 374

#### Respiratory protection:

Gas filtering device (DIN EN 141).

#### Thermal Hazards:

None

#### Environmental exposure controls:

None

#### Appropriate engineering controls:

None

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## SECTION 9: Physical and chemical properties

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

Appearance and colour:	Liquid
Odour:	Pungent
Odour threshold:	N.A.
pH:	<1
Melting point / freezing point:	N.A.
Initial boiling point and boiling range:	50.5°C (HCl 38%) - 104°C (HCl 25%)
Solid/gas flammability:	N.A.
Upper/lower flammability or explosive limits:	N.A.
Vapour density:	N.A.
Flash point:	N.A.
Evaporation rate:	N.A.
Vapour pressure:	3 mmHg (25°C)
Relative density:	1.12-1.19 g/cm <sup>3</sup>
Solubility in water:	42.02 g/100 g solution
Solubility in oil:	N.A.
Partition coefficient (n-octanol/water):	N.A.
Auto-ignition temperature:	N.A.
Decomposition temperature:	N.A.
Viscosity:	N.A.
Explosive properties:	N.A.
Oxidizing properties:	N.A.

### 9.2. Other information

Miscibility: N.A.

Fat Solubility: N.A.  
Conductivity: N.A.  
Substance Groups relevant properties N.A.

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## **SECTION 10: Stability and reactivity**

- 10.1. Reactivity
  - Stable under normal conditions
  - Danger due to exothermic reactions. May be corrosive to metals.
- 10.2. Chemical stability
  - Stable under normal conditions
- 10.3. Possibility of hazardous reactions
  - Forms hydrogen by reaction with metals. Exothermic reaction with bases.
- 10.4. Conditions to avoid
  - Stable under normal conditions.
  - Reaction with strong oxidising agents. Reacts with alkaline substances (bases).
- 10.5. Incompatible materials
  - The product reacts with metals with development of highly flammable hydrogen gas. The acid reacts violently with alkalis developing heat.
- 10.6. Hazardous decomposition products
  - Hydrochloric acid / chlorine / hydrogen.
  - Heating leads to production of corrosive and toxic hydrochloric acid gas / aerosol. Highly flammable hydrogen gas may arise from contact with steel or aluminium and other metals.
  - Contact with fire may lead to the possible development of toxic chlorine gas.
  - Contact with strong oxidisers (bleach, H<sub>2</sub>O<sub>2</sub>, HNO<sub>3</sub>, etc.), leads to the production of toxic chlorine gas.

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## **SECTION 11: Toxicological information**

- 11.1. Information on toxicological effects
  - Toxicological information of the substance:  
CHLORIDRIC ACID IN SOLUTION - Index number: 017-002-01-X
  - a) acute toxicity
    - Not classified
    - Based on available data, the classification criteria are not met
    - Test: LC50 - Route: Inhalation - Species: Rat = 40989 Ppm - Notes: HCl gas (exposure of 5 minutes)
    - Test: LC50 - Route: Inhalation - Species: Rat = 4701 Ppm - Notes: HCl gas (exposure of 30 minutes)
    - Test: LC50 - Route: Inhalation - Species: Rat = 45.6 mg/l - Notes: HCl aerosol (exposure of 5 minutes)
    - Test: LC50 - Route: Inhalation - Species: Rat = 8.3 mg/l - Notes: HCl aerosol (exposure of 30 minutes)
  - b) skin corrosion/irritation
    - The product is classified: Skin Corr. 1B H314
    - Test: Skin Corrosive - Route: Skin Positive
  - c) serious eye damage/irritation
    - The product is classified: Eye Dam. 1 H318
    - Test: Eye Corrosive Positive
  - d) respiratory or skin sensitisation
    - Not classified
    - Based on available data, the classification criteria are not met
  - e) germ cell mutagenicity
    - Not classified
    - Based on available data, the classification criteria are not met
  - f) carcinogenicity
    - Not classified
    - Based on available data, the classification criteria are not met
  - g) reproductive toxicity

- Not classified  
Based on available data, the classification criteria are not met
- h) STOT-single exposure  
The product is classified: STOT SE 3 H335
- i) STOT-repeated exposure  
Not classified  
Based on available data, the classification criteria are not met
- j) aspiration hazard  
Not classified  
Based on available data, the classification criteria are not met

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### SECTION 12: Ecological information

- 12.1. Toxicity  
Adopt good working practices, so that the product is not released into the environment.  
CHLORIDRIC ACID IN SOLUTION - Index number: 017-002-01-X  
Not classified for environmental hazards  
Based on available data, the classification criteria are not met
- a) Aquatic acute toxicity:  
Endpoint: LC50 - Species: Fish = 20.5 mg/l  
Endpoint: LC50 - Species: Algae = 0.73 mg/l
- 12.2. Persistence and degradability  
N.A.
- 12.3. Bioaccumulative potential  
N.A.
- 12.4. Mobility in soil  
N.A.
- 12.5. Results of PBT and vPvB assessment  
vPvB Substances: None - PBT Substances: None
- 12.6. Other adverse effects  
None

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### SECTION 13: Disposal considerations

- 13.1. Waste treatment methods  
Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

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### SECTION 14: Transport information



- 14.1. UN number  
ADR-UN Number: 1789  
IATA-UN Number: 1789  
IMDG-UN Number: 1789
- 14.2. UN proper shipping name  
ADR-Shipping Name: HYDROCHLORIC ACID  
IATA-Shipping Name: HYDROCHLORIC ACID  
IMDG-Shipping Name: HYDROCHLORIC ACID
- 14.3. Transport hazard class(es)  
ADR-Class: 8  
ADR - Hazard identification number: 80  
IATA-Class: 8

IATA-Label:	8
IMDG-Class:	8
14.4. Packing group	
ADR-Packing Group:	II
IATA-Packing group:	II
IMDG-Packing group:	II
14.5. Environmental hazards	
ADR-Environmental Pollutant:	No
IMDG-Marine pollutant:	No
14.6. Special precautions for user	
ADR-Subsidiary hazards:	-
ADR-S.P.:	520
ADR-Transport category (Tunnel restriction code):	(E)
IATA-Passenger Aircraft:	851
IATA-Subsidiary hazards:	-
IATA-Cargo Aircraft:	855
IATA-S.P.:	A3 A803
IATA-ERG:	8L
IMDG-EmS:	F-A , S-B
IMDG-Subsidiary hazards:	-
IMDG-Stowage and handling:	Category C
IMDG-Segregation:	-
14.7. Transport in bulk according to Annex II of Marpol and the IBC Code	
N.A.	

### SECTION 15: Regulatory information

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
- Dir. 98/24/EC (Risks related to chemical agents at work)
  - Dir. 2000/39/EC (Occupational exposure limit values)
  - Regulation (EC) n. 1907/2006 (REACH)
  - Regulation (EC) n. 1272/2008 (CLP)
  - Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
  - Regulation (EU) 2015/830
  - Regulation (EU) n. 286/2011 (ATP 2 CLP)
  - Regulation (EU) n. 618/2012 (ATP 3 CLP)
  - Regulation (EU) n. 487/2013 (ATP 4 CLP)
  - Regulation (EU) n. 944/2013 (ATP 5 CLP)
  - Regulation (EU) n. 605/2014 (ATP 6 CLP)
  - Regulation (EU) n. 2015/1221 (ATP 7 CLP)
  - Regulation (EU) n. 2016/918 (ATP 8 CLP)
  - Regulation (EU) n. 2016/1179 (ATP 9 CLP)
  - Regulation (EU) n. 2017/776 (ATP 10 CLP)
  - Regulation (EU) n. 2018/699 (ATP 11 CLP)
- Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:
- Restrictions related to the product:
    - Restriction 3
  - Restrictions related to the substances contained:
    - No restriction.
- Where applicable, refer to the following regulatory provisions :
- Directive 2012/18/EU (Seveso III)
  - Regulation (EC) nr 648/2004 (detergents).
  - 1999/13/EC (VOC directive)
  - Dir. 2004/42/EC (VOC directive)
- Provisions related to directive EU 2012/18 (Seveso III):
- N.A.

### 15.2. Chemical safety assessment

A Chemical Safety Assessment has been carried out for the substance.

### SECTION 16: Other information

Full text of phrases referred to in Section 3:

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

Hazard class and hazard category	Code	Description
Met. Corr. 1	2.16/1	Substance or mixture corrosive to metals, Category 1
Skin Corr. 1B	3.2/1B	Skin corrosion, Category 1B
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
STOT SE 3	3.8/3	Specific target organ toxicity - single exposure, Category 3

Paragraphs modified from the previous revision:

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

SECTION 2: Hazards identification

SECTION 3: Composition/information on ingredients

SECTION 5: Firefighting measures

SECTION 7: Handling and storage

SECTION 11: Toxicological information

SECTION 14: Transport information

SECTION 15: Regulatory information

SECTION 16: Other information

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre,  
Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van  
Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

ADR: European Agreement concerning the International Carriage of  
Dangerous Goods by Road.

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

CAS: Chemical Abstracts Service (division of the American Chemical  
Society).

CLP: Classification, Labeling, Packaging.

DNEL: Derived No Effect Level.

EINECS: European Inventory of Existing Commercial Chemical Substances.

GefStoffVO: Ordinance on Hazardous Substances, Germany.





## Safety Data Sheet

# CHLORIDRIC ACID IN SOLUTION

GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
N.A.:	Not Available
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.