

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

- **Product identifier**
- **Trade name:** Hydrochloric acid 37 % p. A.
- **Article number:** A0659
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation**
 - Chemical analytics
 - Chemical production
 - Pharmaceutical analysis
 - Chemical
 - Molecular biology
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 - AppliChem GmbH
 - Ottoweg 4
 - D-64291 Darmstadt
 - msds@aplichem.com
- **Further information obtainable from:** Abteilung Qualitätskontrolle / Dep. Quality Control
- **Emergency telephone number:**
 - +49(0)6151 93570 (während der normalen Geschäftszeiten / Inside normal business hours)

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS05 corrosion

Met. Corr.1 H290 May be corrosive to metals.
Skin Corr. 1B H314 Causes severe skin burns and eye damage.



GHS07

STOT SE 3 H335 May cause respiratory irritation.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



C; Corrosive

R34: Causes burns.



Xi; Irritant

R37: Irritating to respiratory system.

- **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

- **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

- **Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS05



GHS07

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- **Signal word** *Danger*
- **Hazard-determining components of labelling:**
hydrogen chloride
- **Hazard statements**
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.
- **Precautionary statements**
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** *Not applicable.*
- **vPvB:** *Not applicable.*

3 Composition/information on ingredients

- **Chemical characterization:** *Mixtures*
- **Description:** *Mixture of substances listed below with nonhazardous additions.*

· **Dangerous components:**

CAS: 7647-01-0	hydrogen chloride	30-50%
EINECS: 231-595-7	 C R34;  Xi R37	
 Skin Corr. 1B, H314;  STOT SE 3, H335		

- **Additional information:** *For the wording of the listed risk phrases refer to section 16.*

4 First aid measures

- **Description of first aid measures**
- **General information:** *Immediately remove any clothing soiled by the product.*
- **After inhalation:** *Supply fresh air and to be sure call for a doctor.*
- **After skin contact:** *Wash with polyethylene glycol 400 and then rinse with plenty amounts of water.*
- **After eye contact:** *Rinse opened eye for several minutes under running water. Then consult a doctor.*
- **After swallowing:**
Rinse out mouth.
Do not attempt to neutralize.
Drink plenty of water and provide fresh air. Call for a doctor immediately.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** *Use fire extinguishing methods suitable to surrounding conditions.*
- **Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
- **Advice for firefighters**
- **Protective equipment:** *Wear self-contained respiratory protective device.*

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Use respiratory protective device against the effects of fumes/dust/aerosol.
- **Environmental precautions:**
Dilute with plenty of water.

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Do not allow to enter sewers/ surface or ground water.

· **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (AppliSorb).

Use neutralizing agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

· **Handling:**

· **Precautions for safe handling**

Do not inhale substance.

Prevent formation of aerosols.

· **Information about fire - and explosion protection:** No special measures required.

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

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** No special requirements.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:** Keep container tightly sealed.

· **Recommended storage temperature:** 15-25°C

· **Storage class:** 8 B

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

7647-01-0 hydrogen chloride

WEL Short-term value: 8 mg/m³, 5 ppm

Long-term value: 2 mg/m³, 1 ppm

(gas and aerosol mists)

· **Additional information:** The lists valid during the making were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **For the permanent contact gloves made of the following materials are suitable:**

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

Value for the permeation: Level ≥ 480 min

· **As protection from splashes gloves made of the following materials are suitable:**

Natural rubber, NR

Recommended thickness of the material: ≥ 0.6 mm

Value for the permeation: Level ≥ 120 min

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Fluid

Colour: According to product specification

· **Odour:** Pungent

· **Change in condition**

Melting point/Melting range: -30°C

Boiling point/Boiling range: 100°C

· **Flash point:** $> 100^{\circ}\text{C}$

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Vapour pressure at 20°C :** 23 hPa

· **Density at 20°C :** 1.048 g/cm³

· **Solubility in / Miscibility with water:** Fully miscible.

· **Solvent content:**

Organic solvents: 0.0 %

Water: 70.0 %

10 Stability and reactivity

· **Reactivity**

· **Chemical stability**

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **Possibility of hazardous reactions**

Violent reactions with strong alkalis and oxidizing agents.

Corrosive action on metals.

Reacts with metals forming hydrogen.

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- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

- **LD/LC50 values relevant for classification:**

7647-01-0 hydrogen chloride

Oral	LD50	900 mg/kg (rabbit)
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- **Primary irritant effect:**

- **on the skin:** Caustic effect on skin and mucous membranes.

- **on the eye:** Strong caustic effect.

- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

12 Ecological information

- **Toxicity**

- **Acquatic toxicity:** No further relevant information available.

- **Additional ecological information:**

- **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralized.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

13 Disposal considerations

- **Waste treatment methods**

- **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packaging:**

- **Recommendation:** Disposal must be made according to official regulations.

- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

- **Land transport ADR/RID (cross-border)**



- **ADR/RID class:** 8 (C1) Corrosive substances.

- **Danger code (Kemler):** 80

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- **UN-Number:** 1789
- **Packaging group:** II
- **Hazard label:** 8
- **UN proper shipping name:** 1789 HYDROCHLORIC ACID, solution
- **Tunnel restriction code** E

· **Maritime transport IMDG:**



- **IMDG Class:** 8
- **UN Number:** 1789
- **Label** 8
- **Packaging group:** II
- **EMS Number:** F-A,S-B
- **Marine pollutant:** No
- **Segregation groups** Acids
- **Proper shipping name:** HYDROCHLORIC ACID, solution

· **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 8
- **UN/ID Number:** 1789
- **Label** 8
- **Packaging group:** II
- **Proper shipping name:** HYDROCHLORIC ACID, solution

- **UN "Model Regulation":** UN1789, HYDROCHLORIC ACID, solution, 8, II
- **Special precautions for user** Warning: Corrosive substances.

15 Regulatory information

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

R34 Causes burns.

R37 Irritating to respiratory system.

· **Department issuing MSDS:** Abteilung Qualitätskontrolle / Dept. Quality Control

· **Contact:** Hr. / Mr. Th. Stöckle

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

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GHS: Globally Harmonized System of Classification and Labelling of Chemicals
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

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