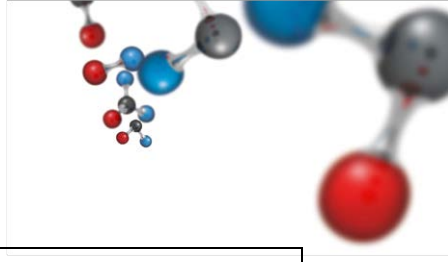
# TECHNICAL DATA SHEET (TDS)
# HYDROCHLORIC ACID SOLUTION



- **Chemical formula:** $HCl+H_2O$
- **Other name of material:** hydrochloric acid, according to ADR/RID: chlorine hydride acid (hydrochloric acid)
- **Molecular mass: 36.5**
- **Hazard identification number:** 80
- **UN number:** 1789
- **Appearance:** Colourless or yellow air-fuming solution with pungent odour

## SPECIFICATIONS

| Tested properties | | Synthetic grade | Technical grade | Industrial grade | Test method |
|---|---|---|---|---|---|
| **Hydrochloric acid (HCl) content** | min. | 33.0 m/m % | 30.0 m/m % | 30.0 m/m % | MSZ 23118:1985 (ISO 904: 1976) |
| **Ignition residue in form of sulphate** | max. | 0.06 m/m % | 0.06 m/m % | 0.06 m/m % | MSZ 901:1986 (ISO 907:1976) |
| **Oxidising or reducing substance content in form of chlorine (Cl) and sulphuric dioxide ($SO_2$)** | max. | 0.01 m/m % | 0.01 m/m % | 0.01 m/m % | MSZ 901:1986 (ISO 908:1980) |
| **Iron (Fe) content** | max. | 0.002 m/m % | 0.003 m/m % | 0.003 m/m % | MFF-232* MSZ 901:1986 (ISO/R 909:1968) |
| **Organic pollution** | max. | - | 0.0001 m/m % | 0.01 m/m % | MFF-226* |

* BorsodChem own method

## APPLICATION AREAS

The largest hydrochloric acid consumer is the chemical industry. Its other application areas are the pharmaceutical, food, metal and water treatment industries. It is also used in oil and gas industry as well as ore and mineral processing.

## HAZARD CLASSIFICATION

According to ADR and RID hydrochloric acid solution is classified in Class 8 (corrosive substances) on the basis of its major hazardous properties.
Any further measures to be taken during transportation can be determined on the basis of this classification.

## PACKAGING AND TRANSPORT

Hydrochloric acid solution can be loaded and delivered in rubber-lined tankers and plastic tanks. It shall be transported in packaging devices in compliance with ADR and RID regulations by both road and rail.

## STORAGE

It can be stored in rubber or plastic lined steel or plastic containers. Contact with substances (e.g. metals, oxidising agents) reacting with hydrochloric acid that may result in toxic, inflammable or other hazardous substances, should be avoided. It should be stored in a well-ventilated place.
No expiry date in properly closed container or storage tank.

## SAFETY MEASURES

Its concentrated aqueous solution in contact with the skin is extremely corrosive and the inhalation of its vapour damages the respiratory tracts and lung tissues.
It is obligatory to wear suitable protective clothing, rubber gloves, rubber boots and safety goggles when handling hydrochloric acid.
For more information please see the material Safety Data Sheet.

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Hydrochloric acid solution

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