

# LIQUID CHLORINE

Last revision 2008

**Chemical Name:** Molecular formula: Cl<sub>2</sub>  
 No.CAS: 7782-50-5  
 Abbreviation: -

## General Description:

Chlorine is manufactured by brine electrolysis, using mercury or membrane cell technologies.

Chlorine is a gas green-yellowish, with specific odour, irritating and sultry.

The product easily liquefies under pressure even at normal temperature. Chlorine is heavier than the air and accumulates in lower areas. It easily dissolves in water, resulting in a yellow-greenish solution (chlorine water), unstable at contact with light. Chlorine easily dissolves in chlorinated organic solvents: chloroform, carbon tetrachloride, dichloroethane, etc.

## Technical Quality Conditions:

Characteristics	MU	Values	Test methods
Chlorine (Cl <sub>2</sub> ), min. (v/v)	%	99.8	STAS 991
Water, max. (w/w)	ppm	35	ILL-033/2-01-12
Nitrogen trichloride (NCl <sub>3</sub> ), max.	ppm	12	ILL-033/2-01-15

## Specific Properties:

Molecular weight	70.914
Boiling point	-33.6°C
Vapour pressure at 20°C	6860 mmHg
Density in gaseous state at 0°C and 760 mm Hg	3.214 g/cm <sup>3</sup>
Density in liquid state at 0°C and 3.65 atm	1.47 g/cm <sup>3</sup>

*The specific properties present approximate values and contain general information, without being part of the technical quality conditions.*

## Main Applications:

- hydrochloric acid;
- rubber;
- synthetic fibers;
- plastics;
- water purification;
- as oxidizing agent for the synthesis of organic, and inorganic chlorinated compounds;
- paper and cellulose bleaching;
- as disinfectant and clean agent in food industry;
- to de-tin tinplate.



## Shipping Information:

- special tanks properly marked, cylinders or containers.
- road transport should be made with special motor vehicles, accompanied by an authorized delegate, instructed in this respect. The rail tanks should be accompanied by an authorized delegate, until they reached the Romanian border.

## Storage:

Liquid chlorine is stored in special containers.

Chlorine cylinders and containers should be stored in a dried ventilated place, protected from excessive heat and direct sunlight, at temperatures under 52°C. It is preferable that the storage room be fire-proof. Storage near gangways or in sub-surface locations should be avoided.

The cylinders or containers should be filled only 85% of their capacity.

Persons employed to handle the product should be instructed with regard to hazards and disposal. Full individual protective equipment should be worn.

## Safety Considerations:

Please refer to the product Material Safety Data Sheet (MSDS) offering customers help to better satisfy their particular handling, safety and disposal needs and those that may be required by locally applicable health and safety regulations.

## Warning:

Liquid chlorine is a toxic product. It is harmful to the environment.

Liquid chlorine is about one-and-one-half times the weight of water. It evaporates extremely rapidly when spilled, one volume of liquid forming 460 volumes of gas. Thus, a liquid chlorine leak may be extremely hazardous, as the quantity of chlorine given out is many times greater than that from a gaseous leak.

Avoid body contact, dangerous to eye and skin, destroys skin, tissues and causes severe chemical burns.

Inhalation of steams can cause serious injury to respiratory tract. Ingestion can injure the digestive system.

## Attention:

Information contained in this document is provided to the best of our knowledge and experience. Please contact OLTCHIM to see if the document has been revised.

## Important:

For a better suitability of the product for your particular purpose, tests are recommended prior product use. You are advised to make your own determination as to safety, appropriate manner of handling, storage, use and disposal. All the information contained in this product technical sheet is offered for your consideration, investigation and verification. The data is presented in good faith and is believed to be reliable. You should not consider the descriptions, information, data or design as a part of our terms and conditions of sale. We expressly disclaim responsibility or liability for any loss, damage or expense arising out of reliance on the information provided herein.