| CODE: UEQFT0003<br>Version: 7<br>Date: 30/12/2025 | TECHNICAL DATA SHEET HYDROCHLORIC ACID<br>CHEMICALS | Brinsa |
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**TECHNICAL DATA SHEET**

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| **PRODUCT NAME** | **Hydrochloric Acid 33% (HCl)** |
| **PHYSICAL DESCRIPTION** | It is a fuming, slightly yellow, aqueous solution with a pungent, irritating odor. Highly reactive. It reacts with most metals, producing hydrogen. It is a product obtained by the combustion of chlorine gas in the presence of hydrogen. After this synthesis process, the resulting hydrogen chloride gas is absorbed in water until the desired concentration is reached. |
| **MAIN INGREDIENTS** | Hydrogen Chloride and Water |

**CONTROL SPECIFICATIONS**

| FEATURE | UNITS | SPECIFICATION | | TECHNIQUE |
|---|---|---|---|---|
| | | Min | Max | |
| HCl Concentration | % m/m | 31.5 | - | Potentiometric Titration |
| Oxidizing substances such as Cl2 | mg/kg | - | 50 | Potentiometric Titration |
| Density at 20 °C | g/ml | 1,155 | - | Oscillation Frequency |
| Iron | mg Fe/kg | - | 5.0 | Spectrophotometry |
| Appearance | N/A | Transparent or slightly yellow | | Qualitative |

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| **MAXIMUM PERMITTED USE** | The maximum permitted use for water treatment is 100 mg/L |

**PACKAGING AND PRESENTATIONS**

| PACKAGED QUANTITY | PACKAGING MATERIAL | PRESENTATION |
|---|---|---|
| Bulk | Fiberglass | Bulk |
| 1000 Kg. | HDPE | IBC x 1000 Liters |
| 240 Kg. | HDPE | Drums x 55 GL |
| 250 Kg. | HDPE | Drums x 58 GL |

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| **SHELF LIFE** | An inorganic chemical that, under proper storage conditions, is not susceptible to any type of decomposition over time. Its condition will only change if it reacts with other chemicals.. |
| **LOT IDENTIFICATION** | The batch code corresponds to the traceability information according to: Production Location–Plant–Year–Julian Day–Shift. For example, for coding in the system, the batch will be recorded down to the shift, with a maximum of seven alphanumeric characters. This code will begin with the letter "L", which identifies the production location (Colombia – Betania), followed by the letter "Q", which corresponds to the Chemicals plant. Next, the digit "5", corresponding to the year 2025, will be included, followed by the Julian day and the manufacturing shift. |

| Lote | Planta | Año | Dia Juliano | Turno |
|---|---|---|---|---|
| L | Q | 5 | 288 | 1 |

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| **APPLICABLE LEGISLATION** | NTC 1030, Decree 1496 of 2018 and its amendment Resolution 773 of 2021. |
| **USES AND INSTRUCTIONS** | It is used especially in the following industries:<br>**CHEMISTRY AND PETROCHEMICALS**<br>Obtaining different chlorides, preparing cationic emulsions and in the plastics industry.<br>**WATER TREATMENT**<br>pH correction in wastewater. Production of activated silica and regeneration of ion exchange resins. Manufacturing of coagulants for water treatment<br>**FOOD**<br>Production of monosodium glutamate, hydrolysis of starch and refining of cane sugar.<br>**CONDITIONING OF METALLIC SURFACE**<br>In iron pickling and in electrolytic coatings and etching.<br>**MINING AND PETROLEUM**<br>Removal of deposits and encrustations of mud and rocks.<br>**BIODIESEL PRODUCTION**<br>Esterification and transesterification by acid catalysis<br>**OTHERS**<br>Textiles, adhesives (rubber), obtaining chlorine dioxide. |

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| **STORAGE CONDITIONS** | Store in a cool, dry, and well-ventilated area (natural or forced ventilation), out of direct sunlight and away from heat sources, at a temperature between 10 and 27°C, never exceeding 40°C. Store away from incompatible materials such as combustible materials, oxidizers, reducing agents, strong bases, and metals. Use corrosion-resistant structural materials and lighting and ventilation systems in the storage area. The storage tank must have a venting system where gases are absorbed in aqueous solution, and it must also have a containment dike (1.5 times the capacity) with an acid-resistant coating.<br>Rapid neutralization equipment, such as basic solutions and spill conditioner, must be available within the storage area. Civil, electrical, mechanical, and other installations must be protected against the corrosive action of hydrochloric acid, and the area must be provided with sufficient and adequate pressurized water outlets. |
| **HANDLING AND TRANSPORT** | For all hydrochloric acid handling operations, the following is recommended: - Thorough local exhaust ventilation, without heating the product. - Use of appropriate personal protective equipment: long gloves and high rubber boots, rubber pants and jacket, safety glasses, face shield, and respirator with a filter for corrosive inorganic gases. - Bulk transport should be done in cylindrical fiberglass tanks and/or plastic containers. |
| **PRECAUTIONS AND RESTRICTIONS** | The maximum permissible concentration is 5 mg/kg in air. Contact can cause eye, skin, lung, and digestive burns.<br>**NOTE:**<br>1. The end use of the product is the sole responsibility of the customer. The information provided is for illustrative purposes only and does not supersede any patents or licenses regarding the use of the product.<br>2. This product is controlled by the National Narcotics Directorate; current legislation must be reviewed for its sale or use.<br>For more information, please refer to the Safety Data Sheet. |
| **ADDITIONAL INFORMATION FROM THE MANUFACTURER** | EMERGENCY ATTENTION. Tel: (601) 8833555 Ext. 444 Cell. 3158945370-3102943054<br>Betania Plant: km. 6 via Cajicá - Zipaquirá<br>Tels: (601) 8833555 Fax: (601) 8793602<br>Medellín Office<br>Tels: (604) 335 50 60 Ext. 1108<br>Brinsa SA Nit: 800-221-789-2<br>AA 3005 Bogotá, DC<br><br>Colombia - South America |