



HYPOCHLORITE SODIUM PRODUCTION

Solutions for the production of sodium hypochlorite

KERN S&D S.L. develops tailored facilities for the production of sodium hypochlorite "in situ" to meet the technical-economic needs of customers.

The KERN S & D systems are fully customizable in terms of production and concentration

The overall reaction of the process is:



TECHNICAL SPECIFICATIONS	
Appearance	Slightly yellow
Melting point	18 °C
Boiling point	101 °C
Density	1.25 g/cm ³
Molar Mass	74.44 gr/mol
Water solubility	29.3 gr/100 ml at 0°C
Formats	
Tanks, drums, IBC	
Monitoring	
Fully automated and monitored plants	
Output	
According to the needs of the client	

- HIGH RELIABILITY
- EASY TO MAINTAIN
- AUTOMATIC CONTROL
- SAFE OPERATION
- NO ENVIRONMENTAL IMPACT
- MODULAR AND SCALABLE
- ECONOMIC SAVING (low operating & maintenance costs)
- HIGH ENERGY EFFICIENCY
- SIGNIFICANT REDUCTION in the associated risks of storage, handling and road transport

CARACTERÍSTICAS DE LAS PLANTAS	
Output	From 60kg/day to 120,000kg/day 15% hypochlorite
Flexibility	50-100%
Concentration	From 5% to 15%
Raw Materials	Salt, water y electricity
Material	Constructed with high quality materials

The exclusive technical features of this system make it suitable for a wide range of applications:

Wide range of applications			
			<ul style="list-style-type: none"> <input type="checkbox"/> Quemical <input type="checkbox"/> Industrial <input type="checkbox"/> Stationer <input type="checkbox"/> Textile <input type="checkbox"/> Agroindustrial <input type="checkbox"/> Hotelier <input type="checkbox"/> Hospitaller <input type="checkbox"/> Food sector <input type="checkbox"/> Agrobusiness <input type="checkbox"/> Oil & Gas <input type="checkbox"/>
Water treatment	Sewage water	Waters of recreation	
Disinfection of waters			

KERN STRATEGIES & DEVELOPMENTS S.L.
 Gran Vía 36, 1º izq., 50.005 ZARAGOZA (SPAIN)
 Tel +34 976 228896
www.kernsd.com



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Sodium hypochlorite production technology

KERN S&D has a groundbreaking technology for the production of sodium hypochlorite (from 5% to 12.5% of active chlorine) "in situ" consisting of a new bipolar membrane electrolyzer (they do not contain mercury) and / or diaphragm (it does not contain asbestos).

The plants designed and developed by KERN S&D use a secure technology, respectful with the environment and highly competitive for its low investment and low operative costs (high electrical efficiency and degree of automation).

The plants are delivered pre-assembled on modular "skids" and, depending on the production, the plants are assembled in containers (containerized plants).

The technology of KERN S & D complies with the Community Directives on the Best Available Technologies (BAT) for the production of chlor-alkali (Directive 2010/75 / EU).



Membrane electrolytic cell



Electrolytic diaphragm cell

Properties

Sodium hypochlorite (whose dissolution in water is known as bleach) is a chemical, strongly oxidizing compound of formula NaClO.

The most economical production of sodium hypochlorite is obtained from the electrolysis of brine, where common salt, electricity and water are used as raw materials.

Uses of sodium hypochlorite

According to the World Health Organization (WHO), "disinfection with chlorine is the best guarantee of a microbiologically potable water", it is the best option for the treatment and purification of water. Sodium hypochlorite is highly effective in combating all types of microbes that water can contain, including bacteria, viruses, fungi and yeasts, and algae and slime that thrive inside pipelines and tanks.

Uses

- Disinfection processes and for water treatment.
- Bleaching agent in the textile industry, detergents and paper and pulp.
- Oxidizing agent of organic products.
- In the petrochemical industry, sodium hypochlorite is used in petroleum refining products.
- As a disinfectant in the treatment of water and wastewater and sanitary devices.
- In food processing.
- Industrial waste treatment.
- Chemical and textile industry.
- Hospitals.
- Sanitation of swimming pools.
- Hypochlorination of drinking water.
- Drinks.
- Application in canneries.
- Dairies.
- Legionella treatment.
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