

HYDROLUX[®] CP229

Chelating Resin Macroporous Type

Descriptions

HYDROLUX[®] CP229 is a food grade new macroporous type ion exchange resin with chelating group for the selective removal of alkaline earth cations. It is suitable for the adsorption of earth alkali ions in the presence of alkali ions.

HYDROLUX[®] CP229 comprise of beads within 450-1100 μm of particle size. This property of Harmonic particle distribution allows operators of resin to use it in more superior conditions such as fast diffusion time, high operating capacity, mechanical/chemical stability and better effluent quality.

HYDROLUX[®] CP229 is especially suitable for use in final polishing of brine feed to chloralkali membrane cells

In brine purification the operating capacity of **HYDROLUX[®] CP229** depends on the pH-value of the brine. At pH 10 it is approx. threefold of that achieved at pH 7. At pH 10 and calcium content of 5 ppm, a capacity up to 14g Ca/l **HYDROLUX[®] CP229** (volume of resin in di-sodium-form) is obtained. At a service flow rate of 20-30 BV/h, the residual calcium values are well below 20 ppb. Greater security can be achieved by operating two units of equal size in series. **HYDROLUX[®] CP229** has to be conditioned with caustic soda solution after every regeneration cycle/before every exhaustion cycle. After the conditioning it is in di sodium-form and ready to use for the final polishing of chloralkali brine feed.

Aside from its major application in brine purification **HYDROLUX[®] CP229** is shipped by Na⁺ Type. Selectivity is like below.

pH < 7 $\rightarrow$ Pb²⁺ > Cu²⁺ > U⁴⁺ > Zn²⁺ > Al³⁺ > Mg²⁺ > Sr²⁺, Ca²⁺, Na⁺, Ba²⁺

pH > 7 $\rightarrow$ Cd²⁺, Mg²⁺ > Ca²⁺ > Sr²⁺, Al³⁺ > Ba²⁺ $\geq$ Na⁺, K⁺

HYDROLUX[®] CP229 does not remove heavy metals from solutions containing EDTA or NTA respectively. Only Cd⁺⁺ is removed from solutions containing cyanides.

HYDROLUX[®] CP229 is certified by TFDA (Taiwan Food and Drug Administration) for Food Additives, and assure compliance with the TFDA Food safety and sanitation regulations.

The certificate no. is 衛部添製字第 002972 號

Matrix + Functional Group	Polystyrene + DVB (Divinyl Benzene) AMPA
Ionic Form	Na ⁺
Shipping Weight (g/L)	740 ± 5%
Specific gravity (g/ml)	1.16 approx.
Total Capacity (eq/L)	2.4 ↑ (H ⁺ form)
Moisture Retention (%)	60 ± 5
Uniformity Coefficient	≤ 1.6
Particle Size (mm) ≥ 95%	0.45 ~1.10
Whole Prefect Beads (%)	95 min
Maximum Swelling (%)	Na ⁺ -->H ⁺ = 25
Operating Temp	80°C max
Operating pH	1~ 12

Suggested Operating Data

Maximum Temperature	80 °C
pH Range	1~12
Minimum Bed Depth	1000 mm
Service Flow Rate	5-25 BV/h
Velocity	30 m/h (max.)
Pressure Drop	250 kPa (max.)

Backwash Flow Rate	
Flow at 50% Expansion, Na ⁺ Form	10 m/h at 20 °C
Flow at 80% Expansion, Na ⁺ Form	16 m/h at 20 °C

Regeneration	
Regenerant	HCl
Regenerant Level	150 g/L-R
Concentration	6~10%
Flow Rate	5 m/h
Rinse Water Flow Rate	5 m/h
Rinse Water requirement	5 BV

Conditions	
Regenerant	NaOH
Regenerant Level	80~88 g/L-R
Concentration	4~6%
Flow Rate	5 m/h
Rinse Water Flow Rate	5 m/h
Rinse Water requirement	5 BV

Handling

To protect eyes and skin of operator, protective gears such as glasses, sometimes gloves are necessary. It is recommended that eye-wash facilities are nearby at the using area. Since it is small beads type, it will be very slippery when it is spilled on the floor. Exposure to high temperature, sparks and flames should be avoided.

Exposure to or mixing with oxidizing agents like nitric acid also should be avoided for the safety.

Storage

Dry, cool and dark places with ventilation are recommended. Storage container bags or drums should be tightly sealed to prevent intrusion of impurities and drying. At high temperature, degradation of capacity may occur and below freezing temperature, freezing of resin may occur. The freezing may cause physical breakage leading to low whole bead count.

Disposal

There are two ways to dispose of resins. Unused ones could be discarded by landfill or incineration following local regulations with fore-mentioned cautions. For incineration, furnace equipped with suitable safety measures is necessary because toxins such as SO_x, NO_x, CO_x could be generated. Used ones could be landfilled or incinerated as well but poisonous materials like heavy metals, if they are contained, should be removed before resins be discarded.

Packaging

25L PE Bag / 200L Drum/ 1,000L Ton bag

Hydrolux Technology Co., Ltd. *We are experts on liquid purification*

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