

Weak Acid Cation Exchange Resin

D113

D113 resin is in a carboxylic acid on the pore structure of acrylic copolymer (-cooh) group - cation exchange resin. Mainly used in industrial water treatment, especially the removal of bicarbonate, carbonate and other alkaline salt, also can be used for zinc, nickel waste recycling, separation and purification of biochemical drugs, etc.

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Name	Specification
Appearance	Opalescent to light yellow opaque spherical beads
Polymer	Acrylic polyacrylic
Functional Group	-COOH
Ionic Form as shipped	H ⁺
Weight Exchange Capacity	≥10.80mmol/g
Volume Exchange Capacity	≥4.50mmol/ml
Real Density (g/ml)	1.14~1.20g/ml
Bulk Density (g/ml)	0.72-0.80g/ml
Water Retention Capacity	45%-52%
Particle Size Range	0.315~1.25 mm≥95%
Uniformity Coefficient	≤1.6
Whole Bead Count (%)	≥95%

Reference Operation Conditions

Maximum operating temperature	100℃
Resin filling height	1~3m
Operating velocity	2~10BV/h
Backwash velocity	4~10BV/h
Regeneration (desorption) velocity	1~2BV/h
Regeneration agent	2BV3~5%HCl, 2BV2~4% NaOH

Application

- Water softening
- Zinc, nickel waste recycling
- The separation and purification of biochemical drugs

Precautions

- Resin should be wet state preservation. The best temperature is above 0°C. Resin should be put into a closed space or add in salt water of 5% or above if not used for a long time. Should be anti-freezing during transportation. Do not place heavy objects on the resin in case being crashed.
- Generally requires alkali- water - acid - water flow path for processing. Strict requirement needs three circulation before coming to final ion kernel.
- Need to consider different transformation expansion rate to set aside enough space to prevent resin overflow and ensure the appropriate liquid level height; Column diameter ratio should be within a reasonable range and avoid bias current; Use wet packed column or back-flushing to wash away bubbles inside resin layer.
- Before liquid going into the resin column, steps as flocculation, filtration, or sand-filtration should be taken so that it doesn't jam resin pore with suspended solids.
- Resin inside the column that hasn't been used for a long time should be stored outside of the column after washing, or adding salt water in the salt resistant medium while keeping liquid level not dehydrated with usual backwashing to loosen resin in case of agglomeration.