

Strong Base Anion Exchange Resin

201X7

201x7 is a polystyrene matrix gel type strong basic anion exchange resin, containing $-N(CH_3)_3$, equivalent to the solid alkali. With high mass full Exchange capacity and good mechanical strength.

Index

Name	Specification
Appearance	Pale white to pale yellow clear spherical beads
Polymer Structure	Gel polystyrene crosslinked with divinylbenzene
Functional Group	$-N(CH_3)_3$
Ionic Form as shipped	Cl^-
Weight Exchange Capacity	$\geq 3.5 \text{ mmol/g}$
Volume Exchange Capacity	$\geq 1.35 \text{ mmol/ml}$
Real Density (g/ml)	1.07~1.10g/ml
Bulk Density (g/ml)	0.67~0.73g/ml
Water Retention Capacity	42%~48%
Particle Size Range	0.315~1.25 mm ≥ 95
Uniformity Coefficient	≤ 1.6
Whole Bead Count (%)	$\geq 95\%$

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

- Pure water preparation
- wastewater treatment
- Wet metallurgy
- Rare element separation

Corresponding Brands

- Amberlite IRA-400
- Amberlite AB-17
- Diaion SA-10A

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.