

Weak Base Anion Exchange Resin

D301

D301 is polystyrene skeleton macroreticular weakly basic anion exchange resin, containing the $-N(CH_3)_2$, weak alkaline resin in alkali type, easy to regenerate, working exchange capacity is 3 times of alkali type, not organic pollution. Using unique processes, and thus has high mechanical strength and chemical stability, widely used in water treatment and desalination of sugar decolorizing, can also be used for the refinement of organic matter and the treatment of wastewater containing chromium.

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Name	Specification
Appearance	Opalescent to light yellow opaque spherical beads
Polymer Structure	Polystyrene crosslinked with divinylbenzene
Functional Group	$-N(CH_3)_2$
Ionic Form	Free Base
Weight Exchange Capacity	$\geq 4.8 \text{ mmol/g}$
Volume Exchange Capacity	$\geq 1.45 \text{ mmol/ml}$
Real Density (g/ml)	1.03~1.06g/ml
Bulk Density (g/ml)	0.65~0.72 g/ml
Water Retention Capacity	48%~58%
Particle Size Range	0.315~1.25 mm ≥ 95
Whole Bead Count (%)	$\geq 95\%$
Effective grain size	0.4-0.7mm
Uniformity coefficient	≤ 1.6

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 treatment
- Sugar decolorizing
- Refined organic matter
- Wastewater treatment

Corresponding Brands

- Purolite A100
- Dowex66
- Amberlite IRA-93

Precautions

- Resin should be wet state preservation. The best temperature is above 0℃. 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.