

NRW-37

Nuclear Grade Mixed Bed Resin

(For the production of high purity water)

Technical Data

PRODUCT DESCRIPTION

Purolite's nuclear resins are processed under the most exacting specifications. These resins are specially purified with high percent conversions to their regenerated form and closely controlled particle sizes. Bead hardness averages over 400 grams in the regenerated forms. All of **Purolite's** nuclear products have whole perfect beads over 95%.

Purolite's nuclear products are used in ultra-pure water, radiation waste, pharmaceuticals, semiconductors, and condensate polishing. Our mixed bed resins may be used in polishers following other types of water processing. Our high grade of nuclear resins insure that the water processed is in fact the highest quality 18.3 megohm (0.055 $\mu\text{S cm}^{-1}$)*.

Purolite NRW-37 consists of **Purolite NRW-400** (strong base type 1 anion) and **Purolite NRW-100** (strong acid cation) both in the regenerated form mixed to a 1:1 chemical equivalent. Other ratios are available upon request. Our mixed bed resins can be used for regenerative or non-regenerative (cartridge) systems.

Purolite mixed bed nuclear resins are processed without declumping agents to insure that the quality obtained is nothing less than the best.

*Depends upon water analysis and equipment used.

Typical Physical & Chemical Characteristics		
	Cation Portion	Anion Portion
Functional Group	R-SO ₃ H ⁺	R ₄ N ⁺ OH ⁻
Ionic Form, as shipped	H ⁺	OH ⁻
Total Exchange Capacity (Volumetric)	1.8 meq/ml min. H ⁺ form	1.0 meq/ml min. OH ⁻ form
Percent Conversion to Ionic Form	99.9% min. H ⁺ form *	95% OH ⁻ form * 5% max. in CO ₃ from Cl ⁻ 0.4% max. **
Volume Ratio	1.0 part NRW-100	1.5 parts NRW-400
Particle Size Range	5% max. > 1.2 mm (16 mesh); 2% < 0.4 mm (40 mesh)	
Physical Appearance	Amber spherical beads (Black cation available)	
Column Capacity	0.58 meq/l (29g CaCO ₃ /l) min. (12.7 Kgr/ft ³) min.	
Heavy Metals Content as ppm by weight of dry resin		
Sodium and Potassium	40 ppm max.	
Iron	100 ppm max.	
Heavy Metals	50 ppm max.	
Moisture Content as shipped	65% max.	
pH Range, Stability	0 - 14	
Shipping weight (approx.)	740 g/l (46 lb/ft ³)	
Operating temperature	Non-regenerative bed	100°C (212°F) max.
	Regenerative bed	60°C (140°F) max.
Operating Flow Rate	12 - 17 m/h (5 - 7 gpm/ft ³) (higher rates for polishing)	
Purity of Deionized Water:	> 10 megohm (0.1 $\mu\text{S cm}$), ranging up to 18.3 megohm (0.055 $\mu\text{S cm}$) depending on pretreatment	
*or as requested. ** NRW-37-LC with 0.1% chloride is available upon request.		

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