

# Resinex™ NC-21

## Strong base anion exchange resin

**Resinex™ NC-21** is a strongly basic gel-type anion exchange resin which is supplied highly regenerated and specially pretreated to meet the stringent specifications of the nuclear industry. The crosslinked polystyrene divinylbenzene matrix provides excellent resistance to physical breakdown. The high operating capacity of **Resinex™ NC-21** will provide an ultra-pure process water and will exceed the requirements of the nuclear industry for low ion leaching in one-time-use application. The low content of eluable chloride ions makes this product highly suitable for pressure water reactor applications at all standard concentrations of boric acid.

### Typical Properties

Type	Crosslinked polystyrene divinylbenzene
Form	Gel-type, amber, spherical beads
Functional group	Quaternary amine, Type 1
Whole bead count	95% min.
Ionic form, as shipped	OH
Bead size	16x40 US mesh (0.42-1.25 mm)
Effective size	0.45 - 0.75 mm
Bulk density	690 kg/m <sup>3</sup>
Real density	1.07 g/cm <sup>3</sup>
Water retention	52-60%
Total capacity	1.10 eq/l min.
Storage temperature	0-40°C
Stability, pH	0-14
Regenerant level, as shipped	95% min.

### Standard Design Conditions

Bed depth	>600 mm
Operating temperature	60°C max.
Chloride content	0.3% max.
Sulfate content	0.2% max.
Pressure drop	0.20 kPa*h/m <sup>2</sup> max.

### Key Features and Benefits

- **Specially Pretreated**  
Suitable for preparation of ultra-pure water
- **High Integrity Beads**  
Excellent resistance to mechanical degradation ensures low pressure drop
- **Low Content Of Eluable Chloride**  
Specified in pressure water reactors at all common concentrations of boric acid
- **High Regeneration Level**  
Enables an extended running capacity in one-time-use applications
- **Low Ion Leakage**  
Very low ion leakage during service run

### Typical Applications

- Ultra-pure water
- Radioactive waste water treatment
- Demineralisation and polishing when used in combination with Resinex™ NC-10 in nuclear power plants.

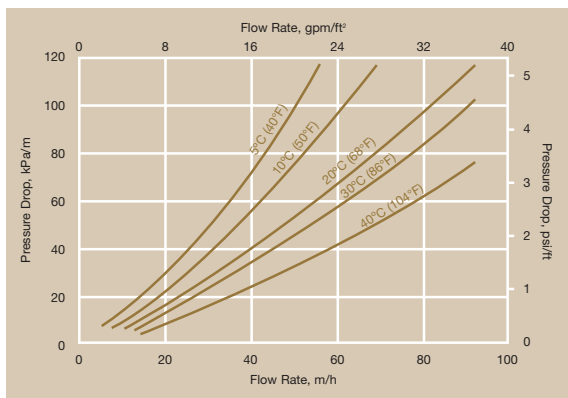
### Standard Packaging

- 25 lit. PE valve bags
- 1000 lit. big bags

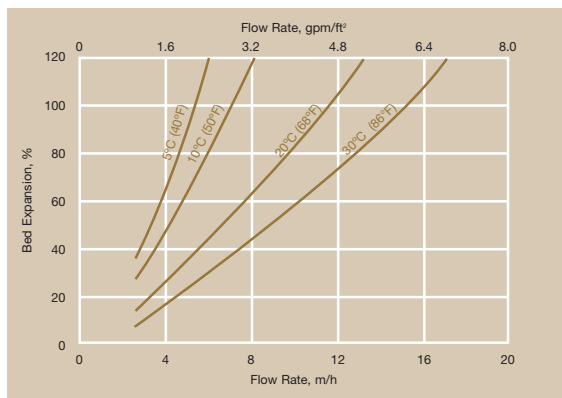
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### Pressure Drop



### Backwash Expansion



### Product Packaging



25 lit. polyethylene valve bags,  
48 bags per pallet



Polypropylene FIBCs  
(big bags), 1000 lit.



**NOTICE** Jacobi Carbons reserves the right to change product specifications without prior notification. The information contained in this datasheet is intended to assist a customer in the evaluation and selection of products supplied by Jacobi Carbons. The customer is responsible for determining whether products and the information contained in this document are appropriate for the customer's use. Jacobi Carbons assumes no obligation or liability for the usage of the information in this datasheet, no guarantees or warranties, expressed or implied, are provided. Jacobi Carbons disclaims responsibility and the user must accept full responsibility for performance of systems based on this data.  
**CAUTION** Strong oxidizing agents such as nitric acid can react violently with ion exchange resins and cause explosive type reactions. Before using strong oxidants, consult sources knowledgeable in the handling of these materials.



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