

# Resinex™ AB-3

## Weak base anion exchange resin

**Resinex™ AB-3** is a high purity, premium grade, weakly basic macroporous anion exchange resin that is highly resistant to osmotic shock. The product has the ability to adsorb reversibly organic molecules and therefore protects strong base anion exchange resins such as **Resinex™ A-4** which follows **Resinex™ AB-3** in serial systems. Thanks to the high regeneration efficiency being close to the stoichiometric ratio, **Resinex™ AB-3** reduces the ionic load in multiple bed systems. The selected bead distribution is especially adapted for all modern counter-current systems (i.e. Schwebbett, UPCORE,..).

### Typical Properties

Type	Crosslinked polystyrene divinylbenzene
Form	macroporous, light brown, spherical beads
Functional group	Tertiary amine
Whole bead count	95% min.
Ionic form, as shipped	Free base
Bead size	0.42 - 1.25 mm
Uniformity coefficient	1.60 max.
Bulk density, as shipped	700 kg/m <sup>3</sup>
Real density	1.08 g/cm <sup>3</sup>
Water retention	48 - 58%
Total capacity	1.75 eq/l min.
Volume change FB → Cl <sup>-</sup>	20% max.
Stability, temperature	75°C max. in free base form
Stability, pH	0 - 14

### Standard Design Conditions

Bed depth	> 750 mm
Service flow rate	8 - 40 BV/h
Backwash expansion	50 - 75%

### Key Features and Benefits

- **High Integrity Beads**  
Excellent resistance to mechanical degradation ensures low pressure drop
- **Easily Regenerable**
- **Extended Total Capacity**  
Economical advantage
- **High Resistance To Osmotic Shock**  
Extended lifetime and very low number of broken beads
- **Selected Bead Size**  
Lower pressure drop and regenerant consumption

### Typical Applications

- Demineralisation in industrial water treatment systems together with **Resinex™ K-8** and **Resinex™ A-4**

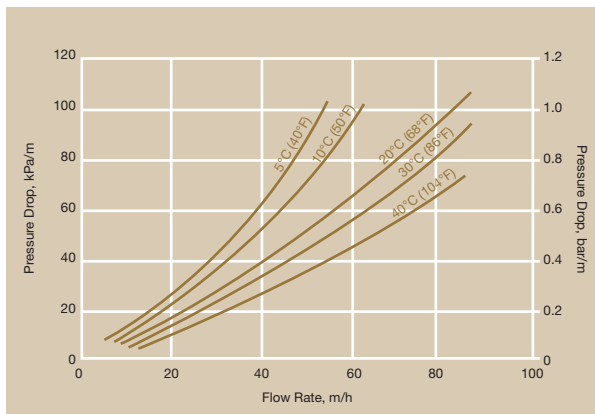
### Standard Packaging

- 25 lit. PE valve bag
- 1000 litre big bag

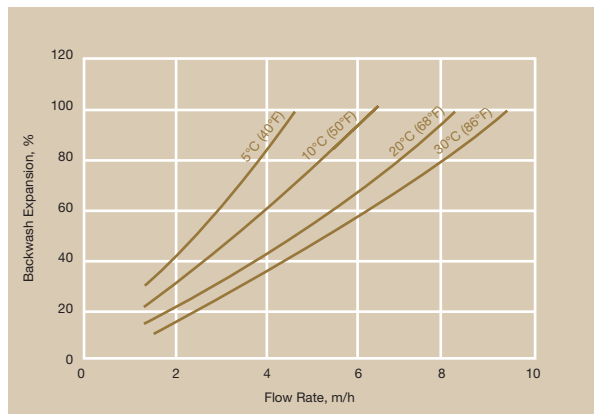
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### Pressure Drop



### Backwash Expansion



### Standard Regeneration Parameters

### Co-Flow

### Counter-Flow

Concentration	3-5% NaOH	2-4% NaOH
Level	75-90 g/l	45-60 g/l
Flow rate regenerant	4-6 BV/h	6-8 BV/h
Contact time regenerant	30-50 min.	20-40 min.
Flow rate slow rinse	4-6 BV/h	6-8 BV/h
Slow rinse water required	2-4 BV	2 BV
Flow rate fast rinse	10-30 BV/h	10-30 BV/h
Fast rinse water required	6-10 BV	6-10 BV

The use of a weak base solution such as ammonia or sodium carbonate as a regenerant is an alternative to caustic soda. Please contact your nearest Jacobi Carbons sales office for further information.

### Product Packing



25 lit. polyethylene valve bag  
42 bags per pallet



Polypropylene FIBCs  
(big bag), 1,000 lit.



**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.



**NOTICE** Due to the progressive nature of the Jacobi Carbons Group and the continually improving design and performance of our products, we reserve 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 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.

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