Resinex™
Ion Exchange Resin

Resinex™ TPX-4004

Strong acid cation exchange resin

Resinex™ TPX-4004 is a high purity, pretreated, premium grade, strongly acid macroporous-type cation exchange resin specially designed for decationisation in the sugar industry. Resinex™ TPX-4004 is a bead type, crosslinked, polystyrene divinylbenzene resin that offers excellent bead integrity and very low extractables. The product is highly suitable for a wide variety of treatment of solutions of organics in the food industry (e.g. decationisation of sugar solutions). The selected bead sizes ensures a low pressure drop and is adapted for all modern systems

Typical Properties

Type	Crosslinked polystyrene divinylbenzene
Form	macroporous, brown opaque, spherical beads
Functional group	Sulfonic acid
Whole bead count	95% min.
Ionic form, as shipped	Na^+
Bead size	(≥90%) 0.42 - 1.25 mm
Uniformity coefficient	1.60 max.
Bulk density, as shipped	820 kg/m^3
Real density	1.25 g/cm^3
Water retention	42 - 48%
Total capacity (Na^+ form)	1.80 eq/l min.
Volume change Ca^{2+} –> Na^+	2% max.
Stability, temperature	120°C max.
Stability, pH	0 - 14

Standard Design Conditions

Bed depth	> 700 mm
Service flow rate	8 - 55 BV/h
Backwash expansion	50 - 75%

Key Features and Benefits

- **Pretreated and Rinsed**
  Guarrantees minimal color throw and eleminates taste and odor
- **High Integrity, Beads**
  Excellent resistance to mechanical degradation ensures low pressure drop
- **Low Extractables**
  Specialy treated to eliminated leaching of organic matters
- **Selected Bead Size**
  Lower pressure drop and regenerant consumption

Typical Applications

- Softening of sugar and pectin thin juices
- Decationisation of sugar solutions
- Extraction of amino acids

Standard Packaging

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

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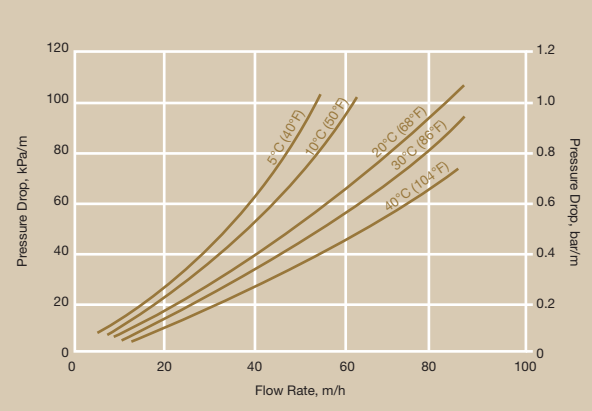
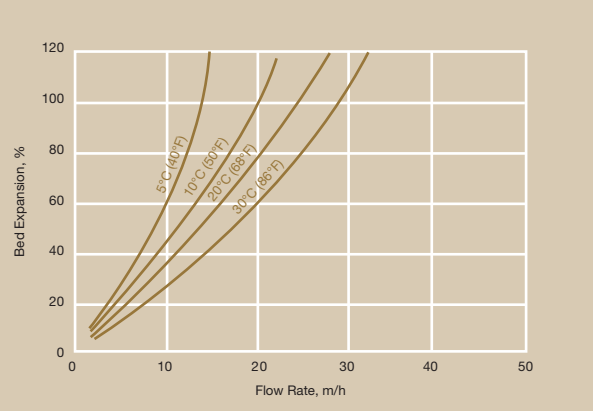
Pressure Drop



Backwash Expansion



Standard Regeneration Parameters	Co-Flow	Counter-Flow
Concentration	5% HCl	5% HCl
Level	60-120 g/l	50-80 g/l
Flow rate regenerant	4-6 BV/h	6-8 BV/h
Contact time regenerant	30-60 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

Product Packing

25 lit. polyethylene valve bag
48 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.

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