PRODUCT SPECIFICATION SHEET

MAGNA

SX-A40-A

STRONG BASE ANION

ADSORBENT ANION EXCHANGE RESIN
TYPE I STYRENIC MACROPOROUS
CHLORIDE FORM

ResinTech SX-A40-A is a strong base anion resin intended for use in the sugar industry for decoloration and organic removal. It is supplied in the chloride form. The media's aliphatic elastic polymer structure allows for fast removal and desorption of medium to low molecular size color forming hydrophilic molecules present in highly concentrated sugar syrups. The SX-A40-A has been designed to operate under high chemical and mechanical stress conditions such high colored sugar syrups (< 500 ICUMSA) and 65° Bx.

APPLICATIONS

- Sugar syrup decoloration
- Natural juices decoloration
- Organic matter removal in water

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TYPICAL PROPERTIES & PHYSICAL CHARACTERISTICS	
Polymer Matrix	Styrenic Macroporous
Ionic Form	Chloride
Functional Group	Quaternary Amine
Physical Form	Spherical Beads
Particle Size, US Mesh (microns)	16 to 50 (297 - 1190 µm)
Percent less than 50 mesh (300µm)	1
Minimum Sphericity (%)	90
Uniformity Coefficient	1.7
Temperature Limit	185° F (85° C)
Capacity (meq/mL)	1.2
Moisture Retention (%)	60 to 65
Shipping Weight, g/L	680 - 700
Color	White to Cream

* NSF/ANSI/CAN 61: Drinking Water System Components - Health Effects
** Paragraph 21CFR173.25 of the Food Additives Regulations of the US FDA

CERTIFICATIONS

- WQA Gold Seal*
- Kosher Certified
- Halal Certified
- FDA Compliance**

Revision 1.2
ResinTech, Inc.®

RESINTECH® INC.
INNOVATIONS IN ION EXCHANGE

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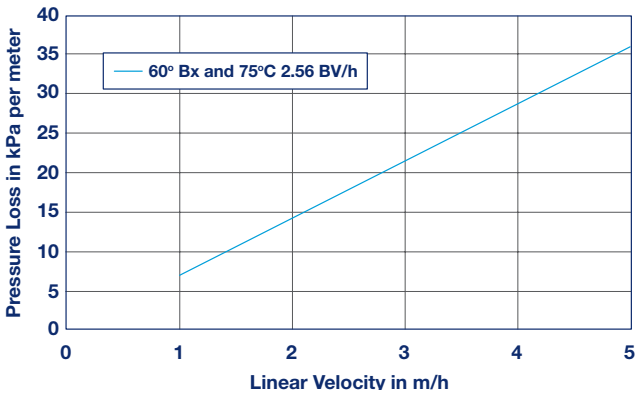
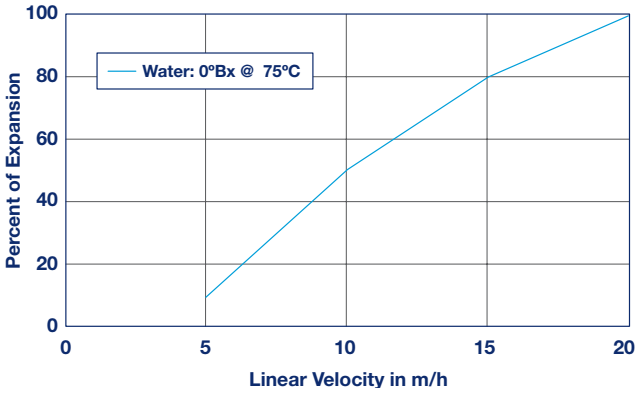
Pressure Loss



The above graph shows the expected pressure loss of the SX-A40-A per meter of resin bed depth as a function of the flow rate at 75° C

Backwash Expansion

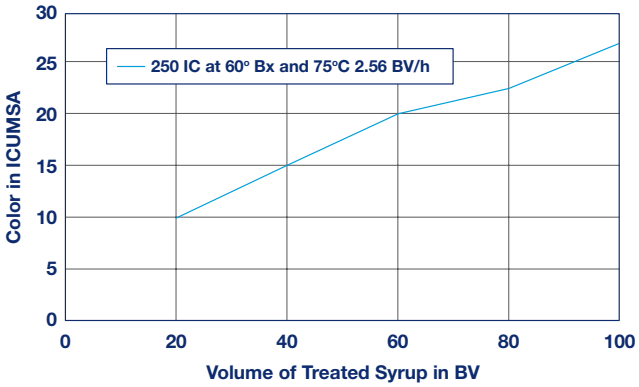


The above graph shows the resin expansion characteristics of the SX-A40-A as a function of the flow rate at 60°C as linear speed in m/h.

SUGAR SYRUP DECOLORATION

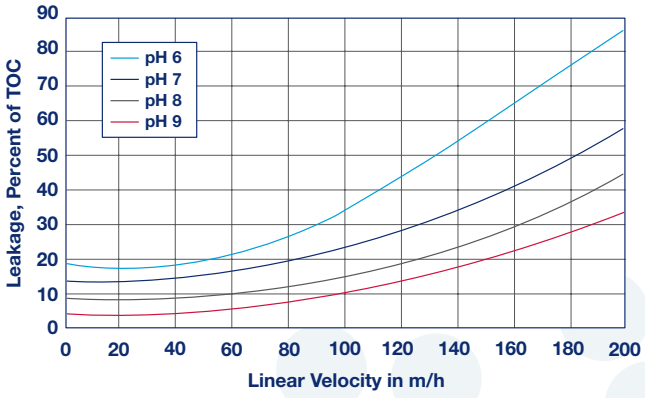
ResinTech SX-A40-A has a very high capacity for the adsorption of low to medium molecular weight and long chain color formation molecules. For best performance, the influent stream should be well-filtered sugar syrup with no traces of any strong oxidizing agents used in the upstream process. For syrup with more than 500 ICUMSA it is recommended to use a double pass system with the first vessel containing ResinTech SX-A60-A, followed by a vessel containing the SX-A40-A. For sugar syrups with less than 250 ICUMSA it is recommended to use a single pass through the SX-A40-A.

Color Leakage for Sugar Syrup



Decoloration capacity based on at 2.56 BV/h flow rate with 1,000 mm resin bed depth. No engineering downgrade has been applied.

The SX-A40-A as an Organic Trap in Water



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The SX-A40-A has excellent capacity for tannins and other naturally occurring organic matter (NOM) which cause most of the color in potable water. The SX-A40-A removes those substances and is easily regenerated with sodium chloride, in the same fashion as a water softener. Organic trap resins should be regenerated frequently to prevent the NOM from building up inside the resin beads and eventually causing fouling. For industrial applications it is sometimes useful to add 0.5 to 2% NaOH in weight, based on the NaCl in order to increase capacity and reduce leakage. The use of chloride form anion resins reduces the pH of the water during the early part of the exhaustion cycle.

SUGGESTED OPERATING CONDITIONS

Maximum continuous temperature Chloride form	80˚C
Minimum bed depth	800 mm
Backwash expansion	min. 50%
Maximum pressure loss	250 kPa
Operating pH range	0 to 14 SU
Regenerant Concentration NaCl	200 g/l + 2 - 4% NaOH
Regenerant flow rate	5 m/h
Regenerant contact time	min. 30 minutes
Displacement flow rate	5 m/h
Displacement volume	2 Bed Volume
Rinse flow rate	5 m/h
Rinse volume	2 Bed Volume

Note: These guidelines describe average low risk operating conditions. They are not intended to be absolute minimums or maximums.
For operation outside these guidelines, contact ResinTech Technical Support

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