SIR-600

Grade: Standard

Ammonia & cesium selective, zeolite cation exchanger, sodium / potassium form

ResinTech SIR-600 is a sodium/potassium form granular naturally occurring aluminosilicate zeolite. It is an inorganic cation exchanger that can also capture certain ions by molecular sieving. SIR-600 is intended for the removal of radioactive cesium from wastewaters that contain moderate levels of sodium and potassium, and for the removal of ammonia from water.

FEATURES & BENEFITS

- Removes Cesium, Ammonia, Strontium & Potassium
- Physically Stable
- Controlled Granule Size

APPLICATIONS

- Cartridge Applications
- Ammonia Removal
- Cesium Removal
- Potassium Removal
- Strontium Removal
- Condensate
- Groundwater
- Neutral Water
- Potable Water

PHYSICAL PROPERTIES

Polymer Matrix	Zeolite
Polymer Type	Crystalline
Ionic Form (as shipped)	Sodium / Potassium (Na^+/K)
Functional Group	Aluminosilicate
Physical Form	Granular
Uniformity Coefficient	1.60
Particle Size	12-40 US mesh (400-1680µm)
< 50 mesh (300 µm) %	< 1%
Capacity (meq/mL)	0.50
Moisture Retention (%)	0 to 10
Shipping Weight	63 - 65 lbs/cu.ft. (1009 - 1041 g/L)
Color	Light Green to Tan

SUGGESTED OPERATING CONDITIONS

Maximum Temperature	212°F (100°C)
Minimum Bed Depth	36 in. (91.4 cm)
Maximum Pressure Loss	25 psi (172 kPa)
Backwash Expansion (%)	25 to 50
Operating pH Range	5.0 to 10.0
Flow Rate	
Working Service	1-5 gpm/cu.ft. (8-40 BV/h)

RESINTECH® INC.
INNOVATIONS IN ION EXCHANGE

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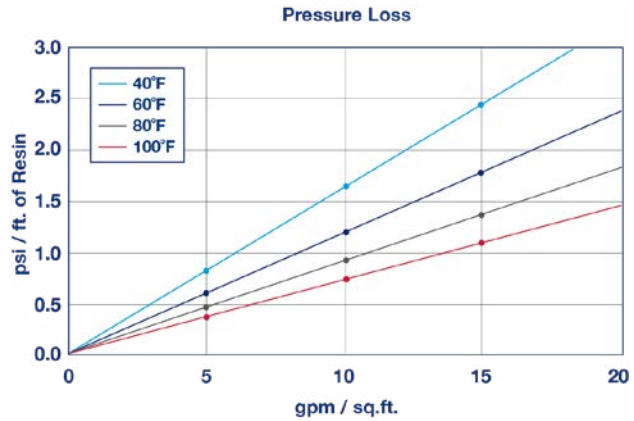
REGENERATION DETAILS

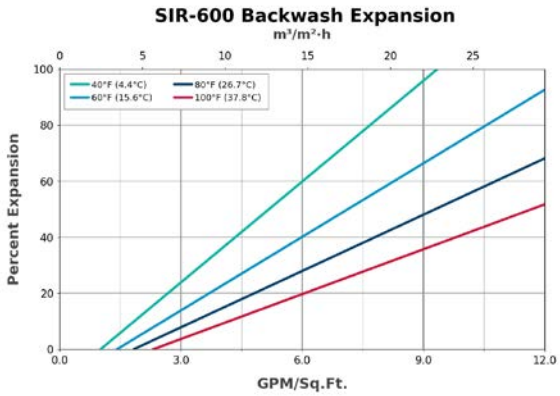
Salt Cycle (NaCl)	10 to 15%	Displacement Flow Rate	Same as dilution water
Regenerant Level	2-10 lbs/cu.ft. (32.0-160.2 g/L)	Displacement Volume	10-20 gals/cu.ft. (1-3 BV)
Regenerant Flow Rate	0.25-1.0 gpm/cu.ft. (2-8 BV/h)	Rinse Flow Rate	Same as service flow
Regenerant Contact Time	> 30 minutes	Rinse Volume	35-60 gals/cu.ft. (5-8 BV)

PRESSURE LOSS



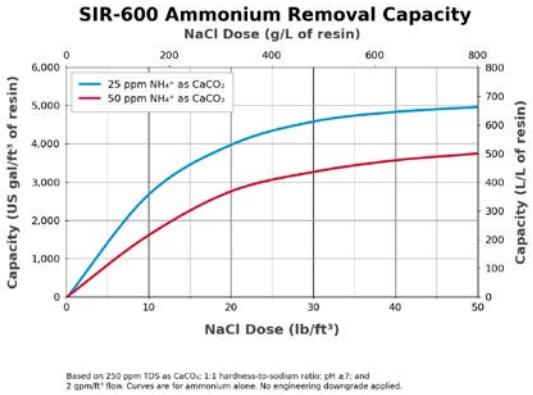
The graph above shows the expected pressure loss of ResinTech SIR-600 per foot of bed depth as a function of flow rate at various temperatures.

BACKWASH EXPANSION



The graph above shows the expansion characteristics of ResinTech SIR-600 as a function of flow rate at various temperatures.

CAPACITY



Capacity and leakage data are based on the following: 2:1 Ca:Mg ratio, 500 ppm TDS as CaCO3, 0.2% hardness in the salt and 10% brine concentration applied co-currently through the resin over 30 minutes. No engineering downgrade has been applied.

CESIUM REMOVAL

ResinTech **SIR-600** has very high selectivity for cesium over sodium and divalent ions, such as calcium and magnesium. Relative affinity for cesium over common ions found in potable water supplies is typically more than 100 to 1. Cesium is not effectively eluted from **SIR-600** by regeneration with brine. Cesium laden **SIR-600** is easily stabilized for safe disposal due to its inorganic crystalline structure.

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PACKAGING

Standard

1 cu.ft. Bag | 7 cu.ft. Drum
25L Bag | 200 L Drum

Metric

5 cu.ft. Drum | 42 cu.ft. Supersack
140L Drum | 1000 L Supersack

Shipping Weight

63 - 65 lbs/cu.ft. (1009 - 1041 g/L)

MATERIAL SAFETY DATA SHEETS (MSDS)

Material Safety Data Sheets (MSDS) are available for all products on the ResinTech website. They contain important health and safety information that may be needed to protect your employees and customers from any known health and safety hazards associated with our products. We recommend that you secure and study the pertinent MSDS for our products and any other products being used.

These suggestions and data are based on information we believe to be reliable. They are offered in good faith. However we do not make any guarantee or warranty. We caution against using these products in an unsafe manner or in violation of any patents; further we assume no liability for the consequences of any such actions.

Safety Data Sheets (SDS) are available at resintech.com

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