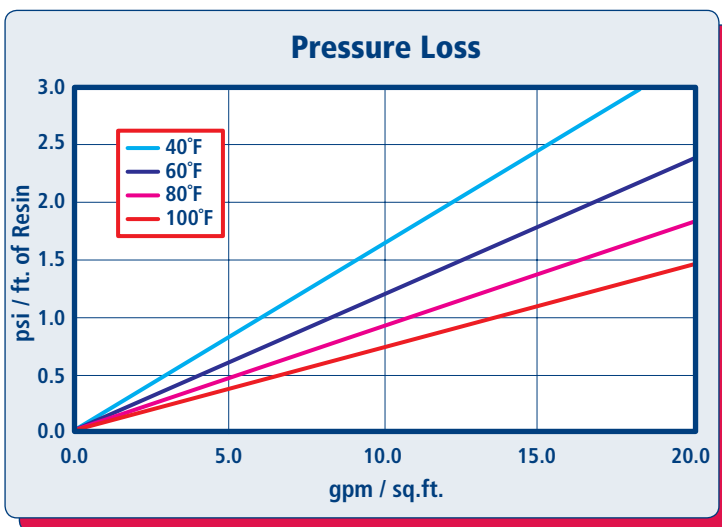


RESINTECH SIR-600 is a sodium/potassium form granular aluminosilicate zeolite. SIR-600 is an inorganic cation exchanger that can also capture certain ions by molecular sieving. RESINTECH SIR-600 is particularly selective for cesium, potassium, and ammonium. SIR-600 is intended for removal of radioactive cesium from waste waters that contain moderate levels of sodium and potassium, and for removal of ammonia from water. RESINTECH SIR-600 is supplied in the mixed sodium/potassium form.

FEATURES & BENEFITS

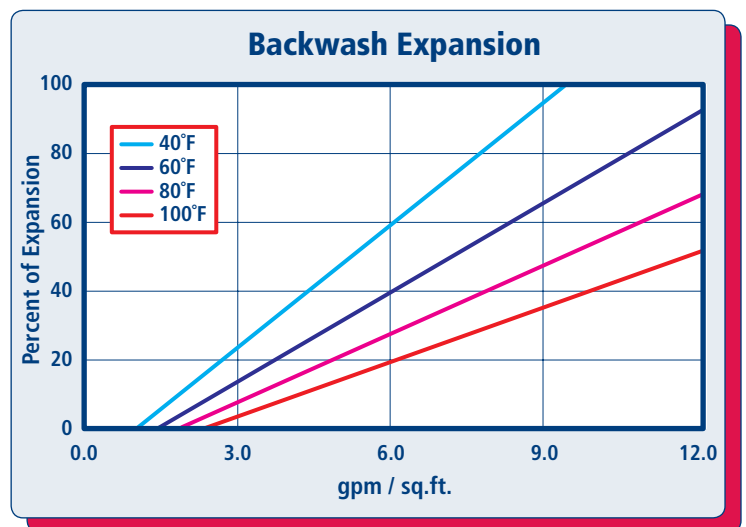
- REMOVES CESIUM, AMMONIA, STRONTIUM & POTASSIUM**
 Selectively removes ions in the presence of hardness and sodium
- ORDER OF SELECTIVITY:**
 $Cs \gg K > NH_4 \gg Na \gg Sr > Ca > Mg$
- PHYSICALLY STABLE**
 Resists oxidative attack and the effects of radiation exposure
- CONTROLLED GRANULE SIZE**
 Large granules provide good physical strength and minimal fines provide low pressure loss

HYDRAULIC PROPERTIES



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

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

PHYSICAL PROPERTIES

| | |
|--------------------------------------|------------------|
| Polymer Structure | Zeolite |
| Polymer Type | Crystalline |
| Functional Group | Aluminosilicate |
| Physical Form | Granules |
| Ionic Form as shipped | Sodium/potassium |
| Total Capacity | |
| Sodium form | >0.5 meq/mL |
| Water Retention | |
| Sodium form | < 10 percent |
| Approximate Shipping Weight | |
| Sodium form | 64 lbs./cu.ft. |
| Screen Size Distribution (U.S. mesh) | 12 to 40 |
| Maximum Fines Content (<50 mesh) | 1 percent |
| Resin Color | Green brown |

Note: Physical properties can be certified on a per lot basis, available upon request

SUGGESTED OPERATING CONDITIONS

| | |
|--------------------------------|-------------------------|
| Maximum continuous temperature | |
| Sodium form | 212°F |
| Minimum bed depth | 36 inches |
| Backwash expansion | 25 to 50 percent |
| Maximum pressure loss | 25 psi |
| Operating pH range | 6 to 10 SU |
| Regenerant Concentration | |
| Salt cycle | 5 to 10 percent NaCl |
| Regenerant level | >10 lbs./cu.ft. |
| Regenerant flow rate | 0.25 to 1.0 gpm/cu.ft. |
| Regenerant contact time | >30 minutes |
| Displacement flow rate | Same as dilution water |
| Displacement volume | 10 to 20 gallons/cu.ft. |
| Rinse flow rate | Same as service flow |
| Rinse volume | 35 to 60 gallons/cu.ft. |
| Service flow rate | 1 to 5 gpm/cu.ft. |

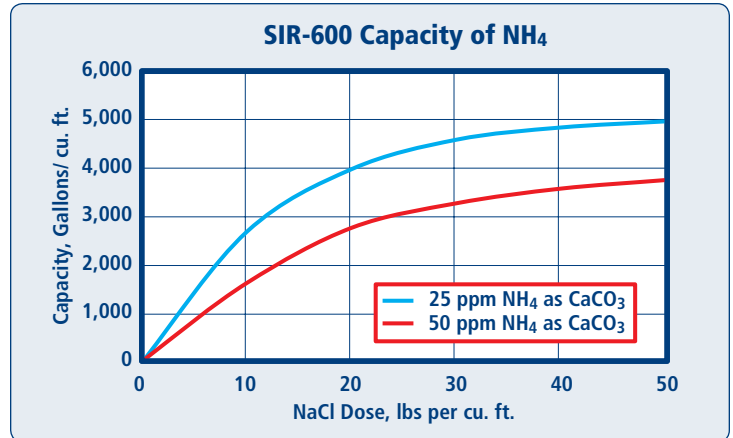
Note: These guidelines describe average low risk operating conditions. They are not intended to be absolute minimums or maximums.

For operation outside these guidelines, contact ResinTech Technical Support

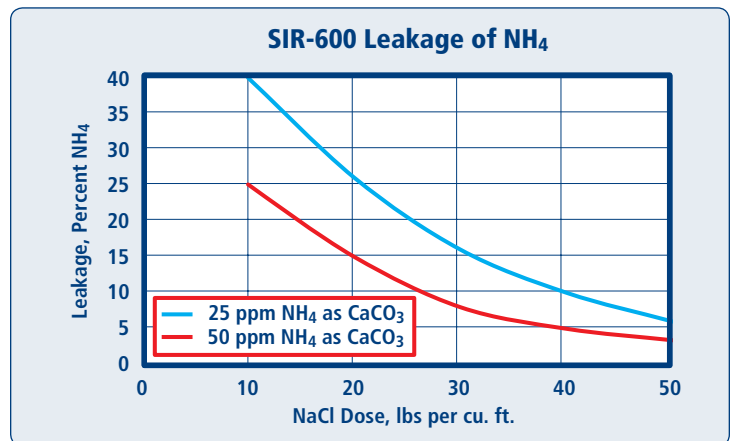
APPLICATIONS

AMMONIA REMOVAL

RESINTECH SIR-600 has high affinity for ammonia compared to sodium and moderate affinity compared to potassium. SIR-600 can be used to remove modest concentrations of ammonia from waters with TDS in the potable water range (less than 500 ppm TDS). Regeneration is accomplished with sodium chloride brine in a fashion similar to a water softener. Because the affinity for ammonia is quite large compared to sodium, the regeneration dose required to remove the ammonia from the media is substantial, generally in the range of 20 to 40 lbs per cu. ft.



Capacity and leakage curves are based on 250 ppm TDS as CaCO₃, 1:1 hardness to sodium ratio, pH at least 7, and a flow rate of 2 gpm/cu.ft. Capacity and leakage curves are for ammonium ion by itself. 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.



East Coast - West Berlin, NJ p:856.768.9600 • Midwest - Chicago, IL p:708.777.1167 • West Coast - Los Angeles, CA p:323.262.1600

CAUTION: DO NOT MIX ION EXCHANGE RESIN WITH STRONG OXIDIZING AGENTS. Nitric acid and other strong oxidizing agents can cause explosive reactions when mixed with organic materials, such as ion exchange resins. MATERIAL SAFETY DATA SHEETS (MSDS) are available for all ResinTech Inc. products. To obtain a copy, contact your local ResinTech sales representative or our corporate headquarters. They contain important health and safety information. That information 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.

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