RSM-50-HP

Grade: High Purity

Radium selective hybrid media, strong acid cation, styrene/DVB macroporous, high purity, sodium form

ResinTech RSM-50-HP is a sodium form macroporous highly crosslinked hybrid strong acid cation resin. It is WQA Gold Seal Certified for use in potable water applications. Barium sulfate is monoatomically dispersed into the polymer resulting in a very long throughput capacity for radium on a one-time basis. RSM-50-HP is intended for radium removal from otherwise potable waters that contain modest concentrations of sulfate and neutral pH.

FEATURES & BENEFITS

- Enhanced Radium Capacity
- Intended For Single Use
- Superior Physical Stability
- Complies With US FDA Regulations

APPLICATIONS

- Radium Removal

PHYSICAL PROPERTIES

Polymer Matrix	Styrene/DVB
Polymer Type	Macroporous
Ionic Form (as shipped)	Sodium (Na^+)
Functional Group	Hybrid
Physical Form	Spherical Beads
Uniformity Coefficient	1.60
Particle Size	16-50 US mesh (297-1190µm)
< 50 mesh (300 µm) %	< 1%
Minimum Sphericity (%)	95
Reversible Swelling	3 to 5% (Na → Ca)
Capacity (meq/mL)	1.80
Moisture Retention (%)	40 to 50
Shipping Weight	59 - 61 lbs/cu.ft. (945 - 977 g/L)
Color	Tan to Brown

SUGGESTED OPERATING CONDITIONS

Maximum Temperature	250°F (121°C)
Minimum Bed Depth	24 in. (61.0 cm)
Maximum Pressure Loss	25 psi (172 kPa)
Backwash Expansion (%)	25 to 50
Operating pH Range	4.0 to 10.0
Flow Rate	
Working Service	1-10 gpm/cu.ft. (8-80 BV/h)

RESINTECH® INC.
INNOVATIONS IN ION EXCHANGE

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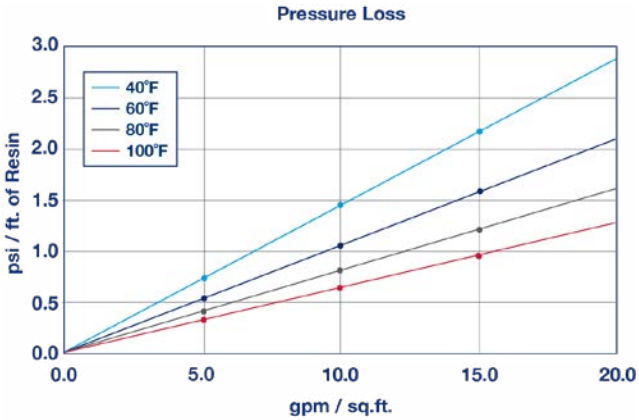
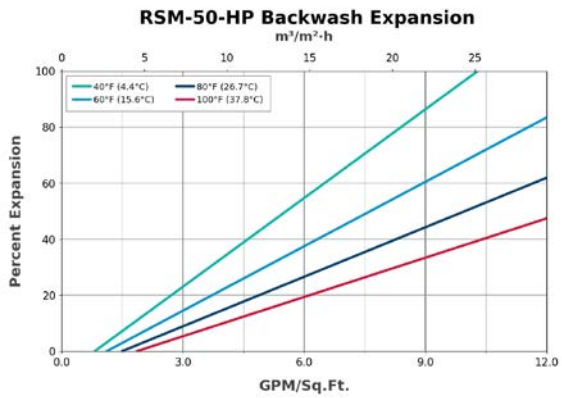
PRESSURE LOSS



The graph above shows the expected pressure loss of ResinTech RSM-50-HP 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 RSM-50-HP as a function of flow rate at various temperatures.

RADIUM REMOVAL

ResinTech **RSM-50-HP** is a specially prepared potable water grade sodium form cation exchanger with barium sulfate precipitated inside the gel phase and in the pores of the polymer. **RSM-50-HP** acts as a hybrid combining ion exchange and adsorbent properties. Radium ions in water are preferentially exchanged. Once inside **RSM-50-HP**, radium replaces barium in the barium sulfate precipitant and barium is released back onto the ion exchange groups. The hybrid properties give **RSM-50-HP** greatly increased life for radium removal over ordinary cation exchangers.

TYPICAL SYSTEM CONFIGURATIONS

Municipal systems may be provided with single or multiple tank systems as needed to provide the necessary flow rate. Residential systems that are infrequently monitored should include two tanks in series so that monitoring for radiation can be performed in between the worker tank and the polisher tank. In either case, it is suggested the radium removal tanks be followed by a carbon filter to capture any radon produced (as the radium adsorbed by the ResinTech **RSM-50-HP** continues to decay). Radium removal systems can become substantially radioactive during use. Care must be taken to limit the treatment life of the resin to ensure that radioactivity levels do not exceed thresholds for safe handling and disposal of the spent media. Spent resins and tanks should be disposed of safely according to applicable state and federal regulations.

CERTIFICATIONS

Meets NSF/ANSI/CAN 61

Meets NSF/ANSI/CAN 372

PACKAGING

Standard

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

Metric

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

Shipping Weight

59 - 61 lbs/cu.ft. (945 - 977 g/L)

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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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