PRODUCT SPECIFICATION SHEET

SUPRA

RSM-50-HP

HYBRID

RADIUM SELECTIVE
HYBRID STRONG ACID CATION
CALCIUM FORM

ResinTech RSM-50-HP is a calcium form macroporous highly cross-linked 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.

APPLICATIONS

- Radium Removal

C US

TYPICAL PROPERTIES & PHYSICAL CHARACTERISTICS	
Polymer Matrix	Styrenic Macroporous
Ionic Form	Calcium
Functional Group	Barium Sulfate Hybrid / Sulfonic Acid
Physical Form	Spherical Beads
Particle Size	16 to 50 US Mesh (297 - 1190µm)
% < 50 mesh (300µm)	< 1%
Minimum Sphericity	90%
Uniformity Coefficient	1.6
Temp Limit	212°F (110°C)
Capacity (meq/mL)	1.8
Moisture Retention	30% to 45%
Shipping Weight	54 - 56 lbs/ft^3 (865 - 897 g/L)
Color	Tan to Brown

CERTIFICATIONS

WQA Gold Seal*

PACKAGING OPTIONS

- 500 ml samples
- 1 ft^3 bags
- 1 ft^3 boxes
- 1 ft^3 drums
- 7 ft^3 drums
- 42 ft^3 supersacks

* NSF/ANSI/CAN 61: Drinking Water System Components - Health Effects

Revision 1.3
ResinTech, Inc.®

RESINTECH® INC.
INNOVATIONS IN ION EXCHANGE

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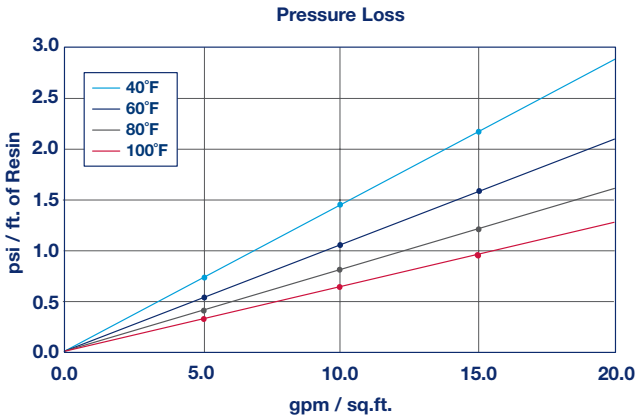

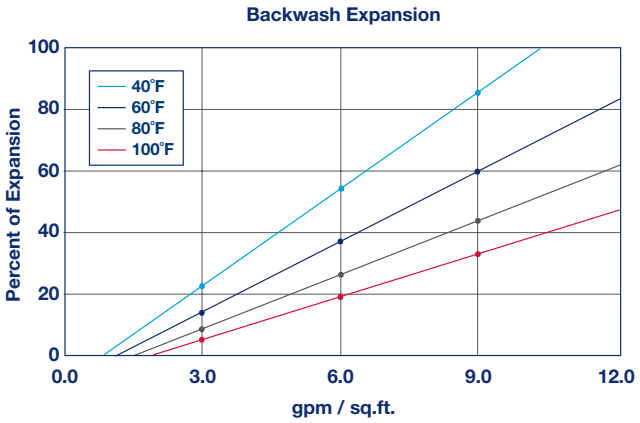

RADIUM REMOVAL

ResinTech RSM-50 HP is a specially prepared potable water grade calcium form cation exchanger with barium sulfate precipitated inside the resin 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 should 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.

Note: Pre-filtration for suspended solids removal is usually advisable ahead of the ResinTech RSM-50-HP system. Ion exchange resins are good filtration medias and suspended solids present in the feed water will likely be trapped within the resin bed. RSM-50-HP remains in service for months or years without regeneration, thus even a low level of suspended solids can accumulate in the resin bed over time.

SUGGESTED OPERATING CONDITIONS

Maximum continuous temperature Calcium form	212˚F
Minimum bed depth	24 inches
Backwash expansion	25 to 50 percent
Maximum pressure loss	25 psi
Operating pH range	4 to 10 SU
Service flow rate	1 to 10 gpm/cu.ft.

Application Note: Certain waters with influent sulfate concentrations of less than 20 ppm have been found to cause barium to leach out the resin above the current maximum contaminant level (MCL) of 2 ppm. For these waters, please consult the ResinTech sales or technical supportteam for application review and additional information.

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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