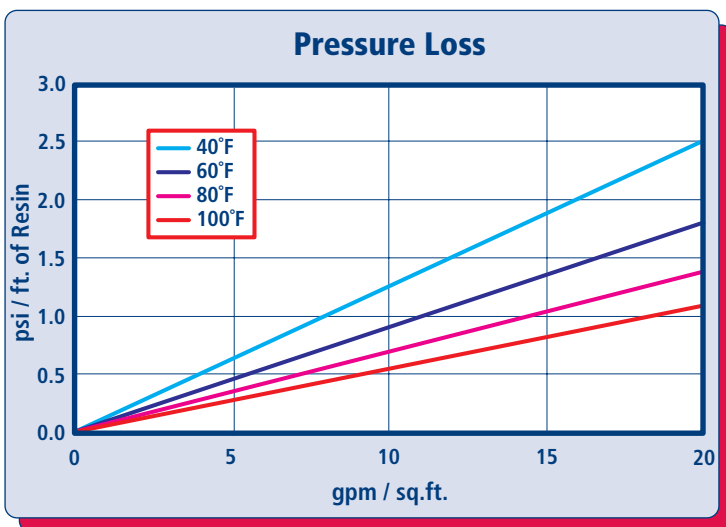


RESINTECH BSM-50 is a borate form hybrid anion resin selective for silica and antimony. BSM-50 contains hydrated iron oxide crystals monatomically dispersed throughout the polymer. It absorbs antimony, silica, and other contaminants by a combination of ion exchange and adsorption. RESINTECH BSM-50 is intended for removing trace levels of antimony and can also be used to remove silica from borated process waters. BSM-50 is supplied in the borate form.

## FEATURES & BENEFITS

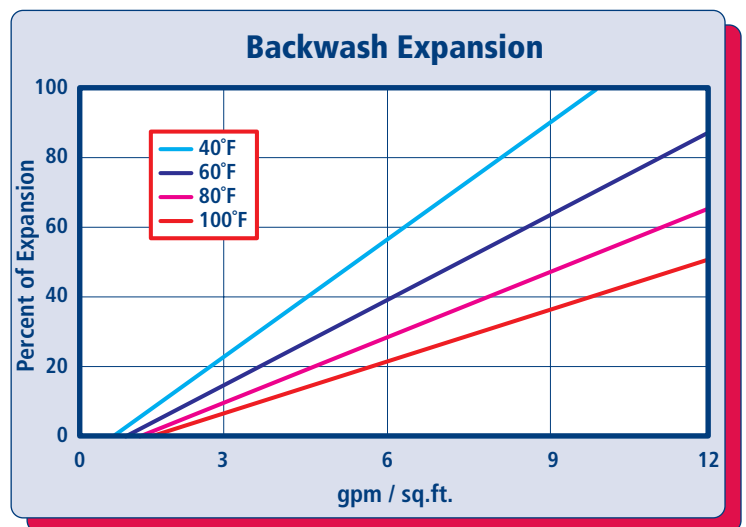
- HIGH AFFINITY FOR ANTIMONY AND SILICA OVER OTHER ANIONS**  
 Formulated for selective removal of antimony and silica
- SUPPLIED IN BORATED FORM**  
 Resin is supplied in the borated ionic form which eliminates any potential release of chloride ions
- SUPERIOR PHYSICAL STABILITY**  
 93% plus sphericity and high crush strengths together with carefully controlled particle distribution provides long life and low pressure drop
- CONTROLLED PARTICLE SIZE**  
 16 to 50 mesh size provides a low pressure drop and superior kinetics

## HYDRAULIC PROPERTIES



### PRESSURE LOSS

The graph above shows the expected pressure loss of ResinTech BSM-50 per foot of bed depth as a function of flow rate at various temperatures.



### BACKWASH

The graph above shows the expansion characteristics of ResinTech BSM-50 as a function of flow rate at various temperatures.

# RESINTECH® BSM-50

## PHYSICAL PROPERTIES

Polymer Structure	Styrene/DVB
Polymer Type	Gel
Functional Group	Hybrid
Physical Form	Spherical beads
Ionic Form as shipped	Borate
Water Retention	
Borate form	35 to 55 percent
Approximate Shipping Weight	
Borate form	49 lbs./cu.ft.
Screen Size Distribution (U.S. mesh)	16 to 50
Maximum Fines Content (<50 mesh)	1 percent
Minimum Sphericity	93 percent
Uniformity Coefficient	1.6 approx.
Resin Color	Black

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

## SUGGESTED OPERATING CONDITIONS

Maximum continuous temperature	
Borate form	170°F
Minimum bed depth	6 to 12 inches
Maximum pressure loss	25 psi
Operating pH range	4 to 10 SU
Service flow rate	1 to 10 gpm/cu.ft.

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

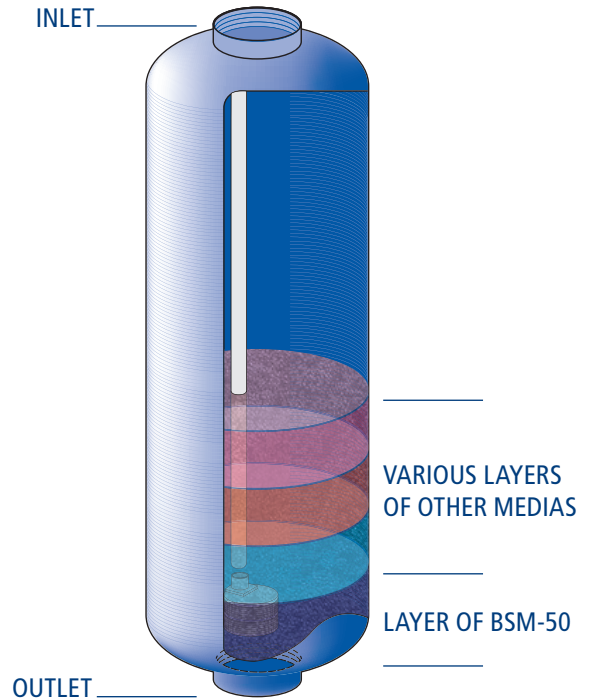
For operation outside these guidelines, contact ResinTech Technical Support

## APPLICATIONS

### ANTIMONY REMOVAL

Trace levels of antimony are adsorbed by the iron hybrid material inside *RESINTECH BSM-50*, which in all other respects remains a strong base anion resin. The resin is typically used as the bottom layer of a multilayer exchange tank. Antimony removal reduction is typically around 90% and in recycle applications where the source of antimony has been removed, remaining antimony can be reduced below the limit of detection.

### TYPICAL USE IS LAYERED UNDERNEATH OTHER MEDIAS



### SILICA REMOVAL

*RESINTECH BSM-50* can be used at moderate pH to remove silica. At a flow rate of 0.5 BV/min, removal efficiency of ninety percent is possible for several hundred bed volumes of throughput. Silica does not dump as the resin exhausts; silica leakage increases gradually but some removal continues for many thousands of additional bed volumes. Even though silica removal is not complete, the lowering of silica helps maintain purity in spent fuel pools and other radwaste systems.

### REMOVAL OF OTHER TRACE CONTAMINANTS

*RESINTECH BSM-50* is also able to remove other traces of activated metal oxides such as nickel, tin, and tellurium.