PRODUCT SPECIFICATION SHEET

SUPRA

CHM-20

HYBRID

TRACE METALS SELECTIVE
HYBRID STRONG BASE ANION
NEUTRAL SALT FORM

ResinTech CHM-20 is a neutral salt form hybrid strong base anion exchange resin. Cerium (and Lanthanum) oxide is monoatomically dispersed throughout the polymer, giving the product hybrid properties. It captures oxyanions first by ion exchange and then by adsorption into the cerium oxide. CHM-20 is intended for potable and industrial applications requiring the selective removal of contaminants such as phosphate, selenite, iodate, bromate, arsenate, etc.

APPLICATIONS

- Arsenic Removal
- Phosphorous Removal
- Iodate Removal

TYPICAL PROPERTIES & PHYSICAL CHARACTERISTICS	
Polymer Matrix	Styrenic Gel
Ionic Form	Neutral Salt
Fuctional Group	Cerium oxide Hybrid / Diethanolamine
Physical Form	Spherical Beads
Particle Size	16 to 50 US Mesh (297 - 1190µm)
% < 50 mesh (300µm)	< 1%
Minimum Sphericity	93%
Uniformity Coefficient	1.6
Temp Limit	250°F (121°C)
Capacity (meq/mL)	1.4
Moisture Retention	35% to 50%
Shipping Weight	47 - 49 lbs/ft³ (753 - 785 g/L)
Color	Amber to Brown

PACKAGING OPTIONS

- 500 ml samples
- 1 ft³ bags
- 1 ft³ boxes
- 1 ft³ drums
- 7 ft³ drums
- 42 ft³ supersacks

Revision 1.0

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MADE IN AMERICA

RESINTECH® INC.
INNOVATIONS IN ION EXCHANGE

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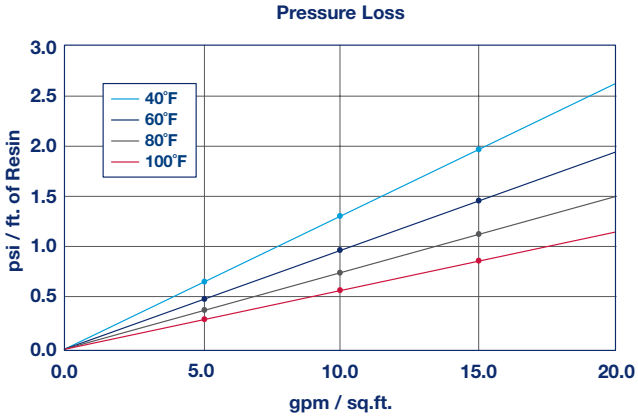

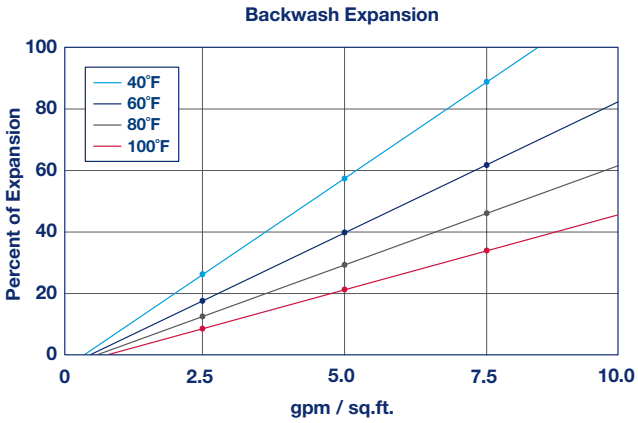

SUGGESTED OPERATING CONDITIONS

Maximum continuous temperature Neutral Salt form	170˚F
Minimum bed depth	24 inches
Backwash expansion	25 to 50 percent
Maximum pressure loss	25 psi
Operating pH range	0 to 14 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

OPERATING CAPACITY

As a general rule the oxyanion must be in its fully oxidized state for effective removal, thus selenate and arsenate are removed much more completely than selenite or arsenite. There is usually an optimum pH for removal that is somewhere near neutral. Consult species and Pourbaix diagrams for conditions that favor the species best removed by the hybrid.

In general, the hybrid capacity for species such as phosphate, selenate, etc. is more than 10 times the throughput capacity to sulfate breakthrough, provided that the contaminant of interest is present as a trace ion (less than 1% of the total anions) and does not load to more than 10% of the hybrid's ion exchange capacity.

As with any other ion exchanger, molecular and zero-valent species are not removed. The parent ion exchanger prevents ions of the opposite charge from entering the resin bead. Molecular species can diffuse into the polymer but are generally not exchanged or adsorbed, therefore their is minimal removal.

Regeneration is possible with either alkaline or acidic regenerants. Consult the ResinTech Technical Department for additional information regarding capacity, leakage, and regeneration.

APPLICATION DATA

CHM-20 is a strongly basic anion parent with cerium oxide hybrid adsorbent. As such it is quite selective for certain oxyanions. CHM-20 has been proven to have hybrid capacity for phosphate, selenate, arsenate, iodate, and bromate. Consult ResinTech Technical support for additional information.

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