CG10-H-UC1

Grade: Standard

Strong acid cation resin, styrene/DVB 10% crosslinked gel, highly uniform particle size, hydrogen form

ResinTech CG10-H-UC1 is an amber-colored highly uniform particle size hydrogen form 10% crosslinked gel strong acid cation resin. The uniform beads and somewhat smaller harmonic mean size yields minimal pressure loss and better regeneration efficiency compared to resins with Gaussian size distribution. It is intended for use in all industrial applications that require a hydrogen form cation resin and is recommended for counter-currently regenerated systems such as packed beds.

FEATURES & BENEFITS

- Highly uniform particle size
- 10% divinylbenzene
- Low color throw
- Superior physical stability

APPLICATIONS

- Packed Beds
- Demineralization / DI
- Condensate Polishing
- Ultrapure Water Production (UPW)
- Mixed Bed Components

PHYSICAL PROPERTIES

Polymer Matrix	Styrene/DVB
Polymer Type	Gel
Ionic Form (as shipped)	Hydrogen (H^+)
Functional Group	Sulfonic Acid
Physical Form	Spherical Beads
Uniformity Coefficient	1.10
Effective Particle Size	675 + 50 µm
< 50 mesh (300 µm) %	< 0.5%
Minimum Sphericity (%)	95
Reversible Swelling	5 to 9% (Na → H)
Capacity (meq/mL)	2.00
Moisture Retention (%)	46 to 52
Shipping Weight	50 - 52 lbs/cu.ft. (801 - 833 g/L)
Color	Amber to Brown
Regenerable	Regenerable

SUGGESTED OPERATING CONDITIONS

Maximum Temperature	265°F (129°C)
Minimum Bed Depth	24 in. (61.0 cm)
Maximum Pressure Loss	25 psi (172 kPa)
Backwash Expansion (%)	25 to 50
Operating pH Range	0 to 14
Flow Rate	
Working Service	1-10 gpm/cu.ft. (8-80 BV/h)

RESINTECH INC.
INNOVATIONS IN ION EXCHANGE

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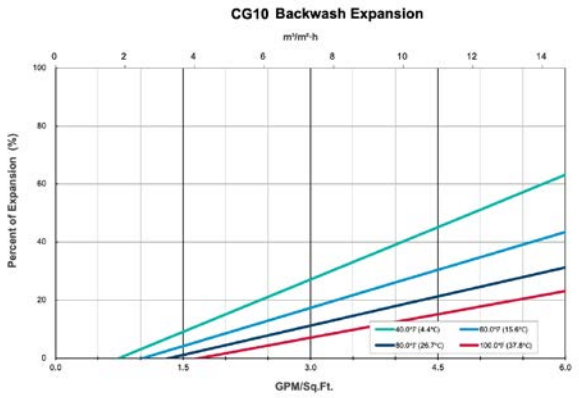
REGENERATION DETAILS

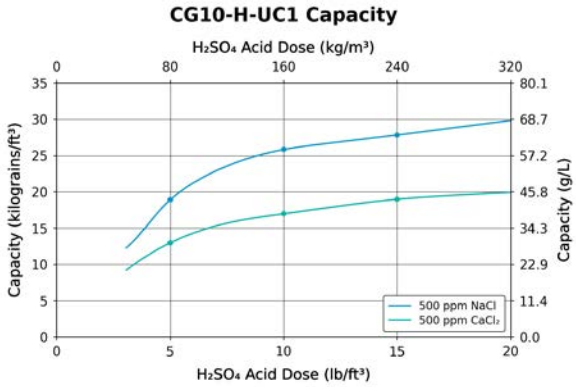
Salt Cycle (NaCl)	10 to 15%
Hydrogen Cycle (H2SO4)	1 to 8%
Hydrogen Cycle (HCl)	5 to 10%
Regenerant Level	4-15 lbs/cu.ft. (64.1-240.3 g/L)
Regenerant Flow Rate	0.5-1.5 gpm/cu.ft. (4-12 BV/h)
Regenerant Contact Time	> 20 minutes
Displacement Flow Rate	Same as dilution water
Displacement Volume	10-15 gals/cu.ft. (1-2 BV)
Rinse Flow Rate	Same as service flow
Rinse Volume	Minimum of 30 gals/cu.ft. (4 BV)

BACKWASH EXPANSION



The graph above shows the expansion characteristics of ResinTech CG10-H-UC1 as a function of flow rate at various temperatures.

CAPACITY



Capacity and leakage data are based on the following: 2:1 Ca:Mg ratio, 500 ppm TDS as CaCO3, 0.2% hardness in the salt and 10% brine concentration applied co-currently through the resin over 30 minutes. No engineering downgrade has been applied.

DEMINERALIZATION

ResinTech **CG10-H-UC1** can be used as the cation component in a variety of demineralization configurations where a hydrogen form cation resin is coupled with a hydroxide form anion resin. The high density of **CG10-H-UC1** provides ideal separation in polishing mixed beds. **CG10-H-UC1** has higher total capacity and lower chemical efficiency compared to **CG8-H-UC1**.

PACKED BEDS

ResinTech **CG10-H-UC1** has a very narrow particle size range. The uniformity allows a slightly smaller bead size to be used which results in faster exchange of ions, more efficient regeneration and lower leakage. **CG10-H-UC1** is ideal for packed beds and other types of countercurrent ion exchangers where consistent operation is important cycle after cycle. Higher void space and minimal fine mesh beads provides low pressure loss and helps prevents channeling and other distribution problems. Packed beds typically have limited freeboard (only a few inches with the resin in the swollen form).

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CERTIFICATIONS

REACH Registered

PACKAGING

Standard

7 cu.ft. Drum | 42 cu.ft. Supersack
200L Drum | 1000L Supersack

Metric

1 cu.ft. Bag | 5 cu.ft. Drum
25L Bag | 140L Drum

Shipping Weight

50 - 52 lbs/cu.ft. (801 - 833 g/L)

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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