

# CG10-H-CP

**Strong acid cation resin, styrene/DVB 10% crosslinked gel, condensate polishing grade, hydrogen form**

ResinTech CG10-H-CP is a condensate polisher grade, 10% crosslinked strong acid cation gel resin in the hydrogen form. It offers high capacity and resistance to both thermal and chemical oxidation. A dark-colored, uniformed particle size resin, CG10-H-CP yields minimal pressure loss and perfect separation from "CP" grade anion resins. It is ideally suited for high flow rate, deep bed condensate polishing applications when paired with either SBMP1-OH-CP or SBG1-OH-CP.



## FEATURES & BENEFITS

- Controlled particle size 10% divinylbenzene
- Superior physical stability
- Low organic leachables

## APPLICATIONS

- Amine Cycle Polishing
- Demineralization / DI
- Condensate Polishing
- Mixed Bed Components

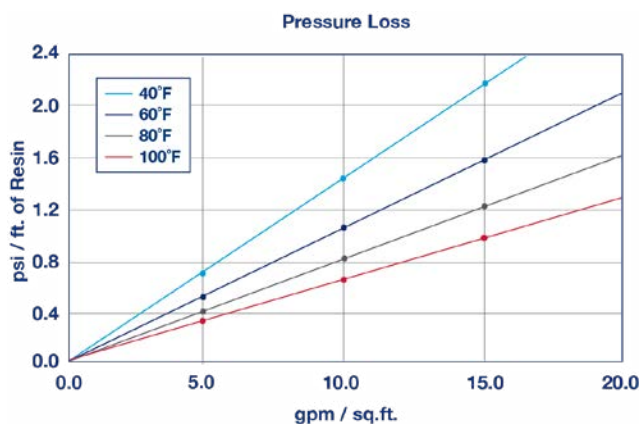


REACH Registered

CG10-H-CP

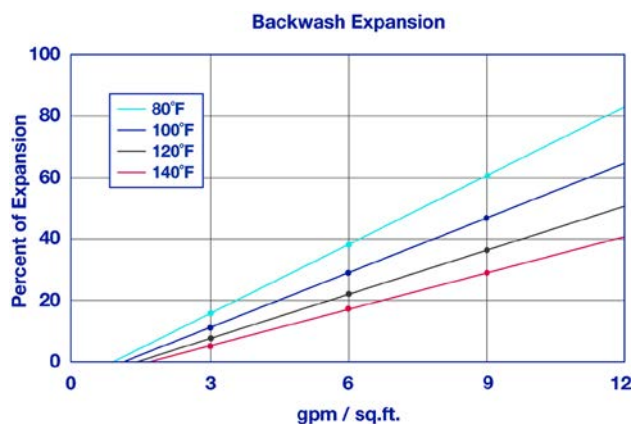
Polymer Matrix	Styrene/DVB	Uniformity	UPS
Polymer Type	Gel	Uniformity Coefficient	1.25
Ionic Form (as shipped)	Hydrogen (H <sup>+</sup> )	Capacity (meq/mL)	2.00
Functional Group	Sulfonic Acid	Moisture Retention (%)	46 to 52
Physical Form	Spherical Beads	Shipping Weight	50 - 52 lbs/cu.ft. (801 - 833 g/L)
Particle Size US Mesh (µm)	16 (1190) to 35 (500)	Color	Dark Brown to Black
< 50 mesh (300 µm) %	< 0.5%	Regenerable	Regenerable
Minimum Sphericity (%)	95	% greater than 200 grams	90
Reversible Swelling	4 to 8% (Na → H)	Average, grams per bead	500

**PRESSURE LOSS**



The graph above shows the expected pressure loss of ResinTech CG10-H-CP 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 CG10-H-CP as a function of flow rate at various temperatures.

**SUGGESTED OPERATING CONDITIONS**

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



**CONDENSATE POLISHING**

ResinTech **CG10-H-CP** is ideally suited for high pressure condensate polishing applications. High DVB crosslinking and high capacity help provide long service life when treating condensates that contain ammonia or other amines. **CG10-H-CP** has narrowly graded particle size and slightly larger bead size to provide low pressure loss and help improve separation from CP grade anion resins.

**AMINE CYCLE POLISHING**

Condensate polishing resins such as ResinTech **CG10-H-CP** can be converted into the amine form before use, or special ordered in the amine form. Amine form resin is useful because this type of resin does not contain sodium and it does not remove the amine that is already present in the condensate. Amine form resins exchange ions in a similar fashion to those in the hydrogen form but without the release of hydrogen back into the condensate. Hydrogen form resin can be directly aminated by recycling an excess of amine through the resin until the reaction is complete. Resins in the neutral salt form cannot be directly aminated. An amine salt can be used or the resin can first be regenerated into the hydrogen form and then aminated directly.

**MAXIMUM IMPURITIES****Metallic Impurities (Moist Basis)**

Sodium (Na) ppm < 40

Iron (Fe) ppm < 50

Copper (Cu) ppm < 10

Aluminum (Al) ppm < 30

Calcium (Ca) ppm < 30

Magnesium (Mg) ppm < 30

Heavy metals (Pb) ppm < 10

**Anionic Impurities**

Post UV Chloride (Cl) < 100 ppb

Post UV Sulfate (SO<sub>4</sub>) < 100 ppb

Water Extractables (TOC) > 10 ppm

**Crush Strength**

Average grams per bead > 500

Percent greater than 200 grams > 95

Lot certification is available and is provided when specified in purchase agreement. This list of impurities complies with EPRI Reference Document 1022558, Procurement Specifications for Nuclear Power Plants.

**REGENERATION DETAILS**

Salt Cycle (NaCl)	10 to 15%	Regenerant Contact Time	> 20 minutes
Hydrogen Cycle (H2SO4)	1 to 8%	Displacement Flow Rate	Same as dilution water
Hydrogen Cycle (HCl)	5 to 10%	Displacement Volume	10-15 gals/cu.ft. (1-2 BV)
Regenerant Level	4-15 lbs/cu.ft. (64.1-240.3 g/L)	Rinse Flow Rate	Same as service flow
Regenerant Flow Rate	0.5-1.5 gpm/cu.ft. (4-12 BV/h)	Rinse Volume	35-60 gals/cu.ft. (5-8 BV)

**PACKAGING**

**Standard**

7 cu.ft. Drum | 42 cu.ft. Supersack  
 1 cu.ft. Bag | 5 cu.ft. Drum

**Metric**

25L Bag | 140L Drum

**SAFETY DATA SHEETS (SDS)**

Safety Data Sheets (SDS) 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](http://resintech.com)

