



# ZG C 257 FD

WEAK ACID GEL CARBOXYLIC  
CATION EXCHANGE RESIN  
Na or H FORM

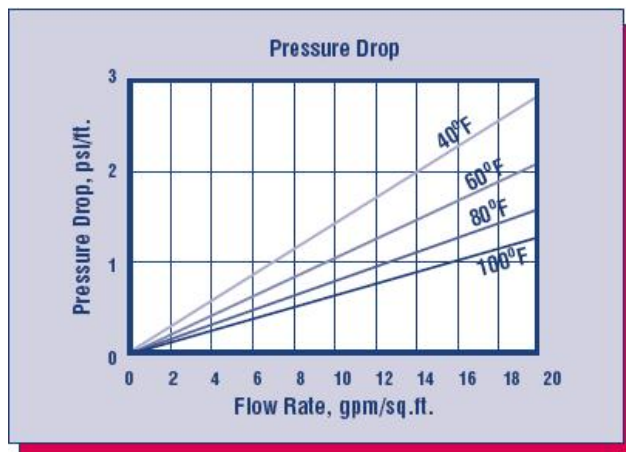
## DESCRIPTION

**ZhengGuang ZGC257 FD** is a premium grade, high capacity, weak acid gel type cation resin supplied in the sodium or hydrogen form as moist, tough, uniform, spherical beads. Ion exchange activity is based on its carboxylic functional group. ZhengGuang ZGC257 FD is intended for use in dealkalization, deionization, and chemical processing applications.

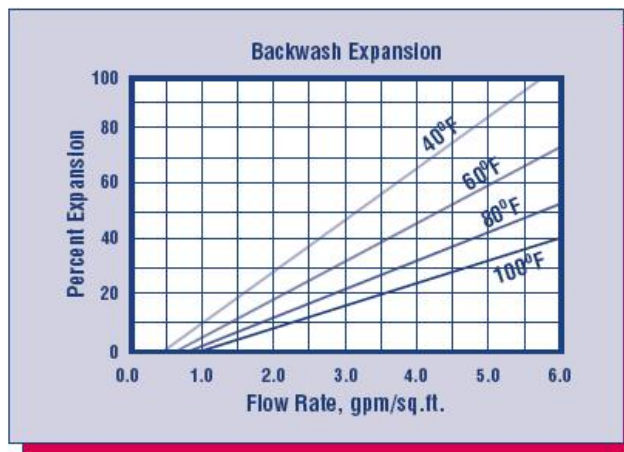
## FEATURES & BENEFITS

- **HIGH CAPACITY**  
Over 80 kilograins total capacity per cubic foot assures maximum operating efficiency and capacity compared with other carboxylic type resins.
- **CARBOXYLIC FUNCTIONAL GROUPS**  
Gives extremely high regeneration efficiencies and high operating capacities.
- **HIGHLY UNIFORM PARTICLE SIZE**  
16 to 50 mesh range; gives a LOWER PRESSURE DROP while maintaining SUPERIOR KINETICS.
- **SUPERIOR PHYSICAL STABILITY**  
90% plus sphericity together with a uniform gel structure and a very uniform particle size provide greater resistance to bead breakage.

## HYDRAULIC PROPERTIES



**PRESSURE DROP**--The graph above shows the expected pressure loss per foot of bed depth as a function of flow rate, at various temperatures.



**BACKWASH**--After each cycle the resin bed should be backwashed at a rate that expands the bed 50 to 75 percent. This will remove any foreign matter and reclassify the bed. The graph below shows the expansion characteristics of **ZhengGuang ZGC257 FD** in the hydrogen form.

## ZhengGuang ZGC257 FD

### TYPICAL PROPERTIES

Polymer Structure	Acrylic/Divinylbenzene
Functional Group	R <sup>-</sup> (COOH) <sup>-</sup>
Ionic Form, as shipped	Sodium or Hydrogen
Physical Form	Tough, Spherical Beads
Screen Size Distribution	16 TO 50 mesh
>16 mesh	< 10 percent
<50 mesh	< 1 percent
PH Range	0 - 14
Sphericity	> 90 percent
Water Retention	
Hydrogen Form	52 to 58 percent
Solubility	Insoluble
Approximate Shipping Weight	
Hydrogen Form	47
Sodium Form	44
Swelling H <sup>+</sup> to Na <sup>+</sup>	95% percent max
Total Capacity	
Sodium Form	2.0 mmol/ml min
Hydrogen Form	4.0 mmol/ml min

## SUGGESTED OPERATING CONDITIONS

Maximum Temperature	250°F
Minimum Bed Depth	30 inches
Backwash Rate	50 to 75% Bed Expansion
Regenerant Concentration	
HCl	1 to 4 percent
H <sub>2</sub> SO <sub>4</sub>	0.8 to 8 percent
Regenerant Flow Rate	0.3 to 0.75 gpm/cu.ft
Regenerant Contact Time	At least 30 Minutes
Regenerant Level	Depends on Alkalinity
Displacement Rinse Rate	Same as Regenerant Flow Rate
Displacement Rinse Volume	10 to 15 Gallons/cu.ft
Fast Rinse Rate	Same as Service Flow Rate
Fast Rinse Volume	35 to 60 gal/cu.ft
Service Flow Rate	2 to 5 gpm/cu.ft

## APPLICATIONS

**DEMINERALIZATION** – ZhengGuang ZGC257 FD can be used to remove cations associated with alkalinity in multiple bed demineralizers.

**SOFTENING** – ZhengGuang ZGC257 FD can be operated as a softener, in the sodium cycle. This requires a two stage regeneration using a strong acid first stage to remove multivalent ions from the bed followed by a neutralization rinse with an alkali.

**DEALKALIZATION**-Bicarbonate alkalinity associated with multivalent cations such as hardness can be effectively removed using ZhengGuang ZGC257 FD in the hydrogen form. When operated in this manner both hardness and alkalinity and the ratio of hardness (multivalent cations) to alkalinity.

**All our products are produced in ISO 9001-2000 certified manufacturing facilities.**

**\*CAUTION:DO NOT MIX ION EXCHANGE RESIN WITH STRONG OXIDIZING AGENTS.** Nitric acid and other strong oxidizing agents can cause explosive reactions when mixed with organic materials,such

as ion exchange resins.

**Material Safety Data Sheets (MSDS)** are available for all ZhengGuang Resin Co., Ltd .products. To obtain a copy, contact your local ZhengGuang sales representative or our corporate headquarters. They contain important health and safety information. That information 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.



FOR OVERSEAS



FOR DOMESTIC