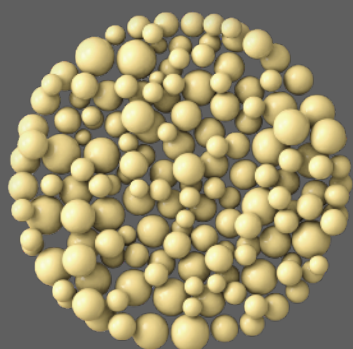


Felite™ Resin

FC311



Weak Acid Cation, Porous

Standard Mesh Size

H⁺ form

Industrial Grade

Felite™ FC311 is a porous-type polyacrylic weak acid cation exchange resin with standard mesh size. Its carboxylic type functional groups give high chemical efficiency in many applications, especially for the removal of bicarbonate alkalinity in water treatment. Its major use is in the dealkalization and softening of waters and thereby the ionic load on the subsequent strong acid resin bed can be reduced.

Felite™ FC311 product has also been used to selectively recover transition metals from aqueous solutions.

Principal Application:

- Softening – Industrial;
- Demineralization;
- Dealkalization;

TYPICAL PHYSICAL & CHEMICAL CHARACTERISTICS:

Polymer Structure	Polyacrylic Acid, Macroporous
Appearance	Spherical Beads
Functional Group	Carboxylic Acid
Ionic form, as shipped	H ⁺
Total Capacity (mmol/ml)	4.7 min. (H ⁺)
Moisture Retention	45 -55%
Particle Size Range (mm)	0.3 - 1.2 (≤0.3mm, 1% max.; > 1.2mm, 5% max.)
Uniformity Coefficient (max.)	1.7
Reversible Swelling, H⁺ → Ca²⁺ (max.)	20%
Reversible Swelling, H⁺ → Ca²⁺ (operating)	8%
Reversible Swelling, H⁺ → Na⁺ (max.)	60%
Shipping Weight (g/L, approx.)	740 - 780 (48 lb/ft ³)
Specific Gravity	1.19
Temperature Limit	120°C (248°F)
Stability, pH Range	0 - 14

PACKAGING:



25 Litres / 1 cu.ft PE Bag;
42 Bags Per Pallet;
20 Pallets Per 20ft Container



1 m³ Supersack Per Pallet;
20 Pallets Per 20ft Container



Asia Pacific

Yancheng, Jiangsu, China
sales@felitecn.com

America

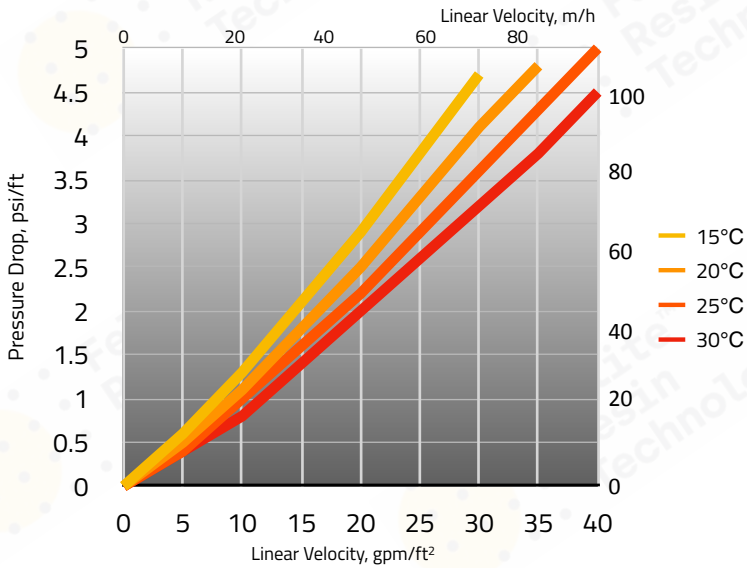
San Gabriel, CA, USA
sales@felitecn.com

Europe

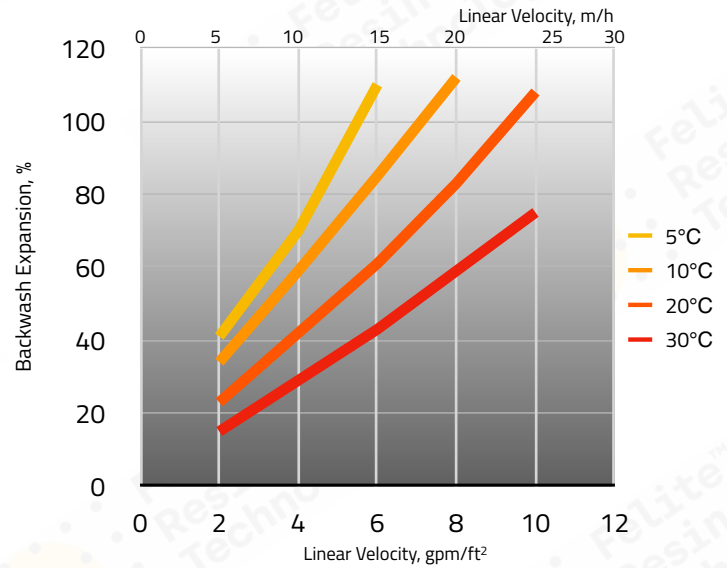
Cluj Napoca, Romania
sales@felitecn.com



PRESSURE DROP



BACKWASH EXPANSION



PERFORMANCE

The operating capacity depends on several factors such as the water analysis and the level of regeneration. The data to calculate the operating capacity and the ionic leakage with co-flow regeneration are given in the Engineering Data Sheets.

Regeneration

Felite™ FC311 resin is readily regenerated with little over stoichiometric amounts of strong acids. If sulfuric acid is used, care must be taken to apply a low concentration of H₂SO₄ (**0.7%**) in order to avoid calcium sulfate precipitation.

LIMITS OF USE

Felite™ FC311 resin is suitable for industrial uses. For other specific applications such as pharmaceutical, food processing or potable water applications, it is recommended that all potential users seek advice from Felite™ Resin Technology in order to determine the best resin choice and optimum operating conditions.

HYDRAULIC CHARACTERISTICS

Figure 1 shows the pressure drop data for Felite™ FC311 resin, as a function of service flow rate and water temperature. Figure 2 shows the bed expansion of Felite™ FC311 resin, as a function of backwash flow rate and water temperature. Pressure drop data are valid at the start of the service run with clear water and a correctly classified bed.

SUGGESTED OPERATING CONDITIONS:

Minimum Bed Depth

700mm

Service Flow Rate

5 - 70 BV*/h

Regeneration

- Regenerant

HCl

H₂SO₄

- Level (g/L)

104 - 110% of the operating capacity

- Concentration (%)

2 - 5

0.5 - 0.7

- Minimum Contact Time

30 minutes

- Slow Rinse

2 BV* at regeneration flow rate

- Fast Rinse

2 - 4 BV* at service flow rate

* 1 BV (Bed Volume) = 1 m³ solution per m³ resin

The statements, technical information and recommendations contained herein are believed to be accurate as of the date hereof. Since the conditions and methods of use of the product and of the information referred to herein are beyond our control, Felite™ expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.

Asia Pacific

Yancheng, Jiangsu, China
sales@felitecn.com

America

San Gabriel, CA, USA
sales@felitecn.com

Europe

Cluj Napoca, Romania
sales@felitecn.com

