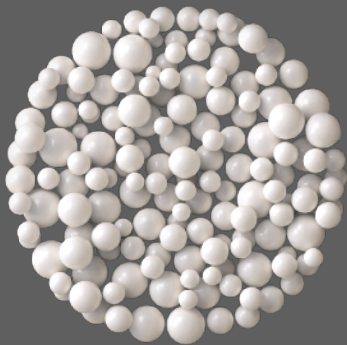


Felite™ Resin

FS400



Weak Acid Cation, Macroporous

Standard Mesh Size

Na⁺ form

Industrial Grade

Felite™ FS400 is a macroporous polystyrene-based chelating resin, with Iminodiacetic groups designed for the removal of cations of heavy metals from industrial effluents. It finds use in processes for extraction and recovery of metals from ores, galvanic plating solutions, pickling baths, and effluents even in the presence of alkaline earth metals (calcium and magnesium). Further important uses include the refining of the salt solutions of transition and precious metals and for the cleaning and purification of various organic or inorganic chemical products by removal of heavy metals contamination (usually from aqueous solution).

Under Acidic condition:

Copper > Vanadium > Uranium > Lead > Nickel > Zinc > Cadmium > Iron (II) > Beryllium > Manganese > Calcium > Magnesium > Strontium > Barium > Sodium

Under Alkaline condition:

Calcium > Magnesium > Strontium > Nickel > Barium > Aluminum > Iron (III) > Copper > Iron (II) > Cadmium > Vanadium > tungsten > Sodium

Principal Applications:

- Heavy Metal Removal;
- Wastewater Treatment;

TYPICAL PHYSICAL & CHEMICAL CHARACTERISTICS:

Polymer Structure	Styrene/DVB, Macroporous
Appearance	Spherical Beads
Functional Group	Iminodiacetic
Ionic form, as shipped	Na ⁺
Cu²⁺ Capacity (mmol/ml)	0.6 min.
Moisture Retention	52 -60%
Particle Size Range (mm)	0.3 - 1.2 (≤0.3mm, 1% max.; > 1.2mm, 5% max.)
Uniformity Coefficient (max.)	1.7
Reversible Swelling, H⁺ → Na⁺ (max.)	35%
Shipping Weight (g/L, approx.)	700 - 800 (44 lb/ft ³)
Specific Gravity	1.18
Temperature Limit	80°C (176°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

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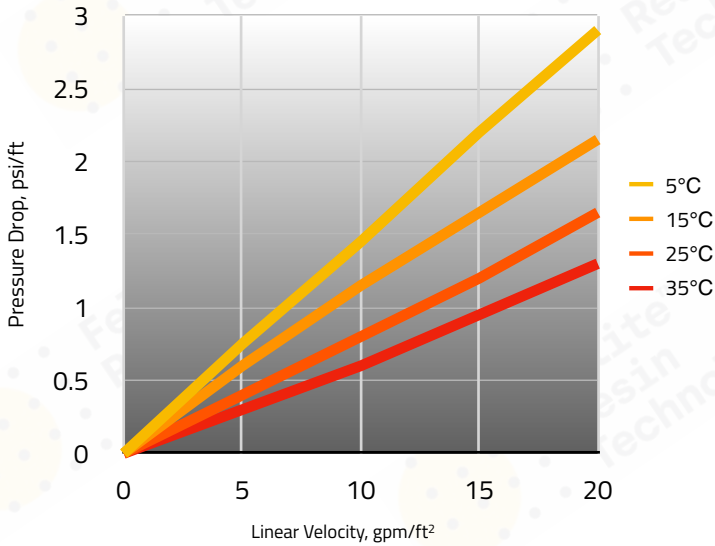
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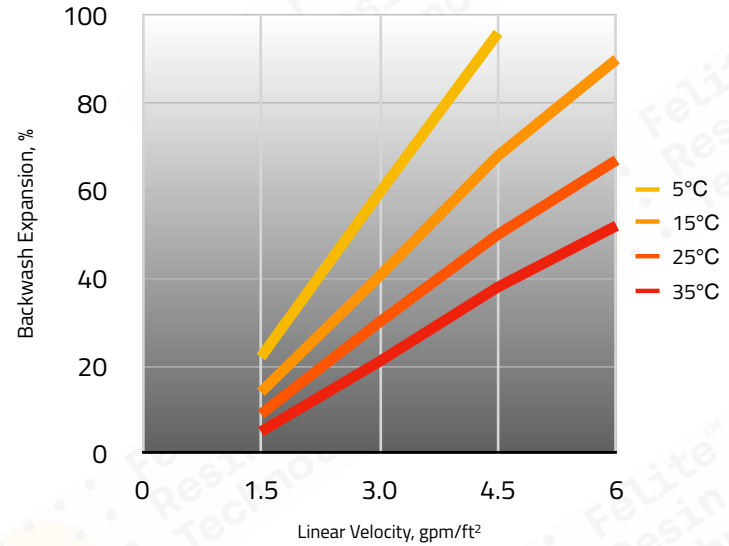
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PRESSURE DROP IN BRINE



BACKWASH EXPANSION



PERFORMANCE

The resin can operate in a neutral, acidic or alkaline medium, but since its capacity depends on the pH, we recommend the following minimum pH values.

pH minimum	2	2.5	3	4.5
Cations	Cu ²⁺ Pb ²⁺	Zn ²⁺	Cd ²⁺ Ca ²⁺	Mg ²⁺ Ni ²⁺ Co ²⁺

LIMITS OF USE

Felite™ FS400 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™ FS400 resin in brine.

Figure 2 shows the bed expansion of Felite™ FS400 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	Up to 40 BV*/h	
Regeneration		
- Regenerant	NaOH	HCl
- Level (g/L)	120	150
- Concentration (%)	0.5 - 6	0.5 - 6
- 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.

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