



AMBERLITE® IRN77

Industrial Nuclear Grade Strong Acid Cation Resin

PRODUCT DATA SHEET

AMBERLITE IRN77 is a uniform particle size strongly acidic gelular polystyrene cation exchanger supplied in the hydrogen form. This resin is Nuclear Grade and processed to the highest purity standards to meet the most stringent requirements of the nuclear power industry. AMBERLITE IRN77 contains a

minimum of 99 % of its exchange sites in the hydrogen form.

The uniform particle size and the absence of fine resin beads results in a lower pressure drop compared to conventional resins.

PHYSICAL CHARACTERISTICS

Physical form _____	Uniform particle size spherical beads
Shipping weight _____	800 g/L
Harmonic mean size _____	650 ± 50µm
Uniformity coefficient _____	≤ 1.2
Particle size ^[1] _____	< 0.300 mm : 0.2 % max > 1.180 mm : 2.0 % max
Whole beads _____	95 % minimum
Breaking weight (average) _____	≥ 350 g/bead
> 200 g/bead _____	≥ 95 %

CHEMICAL CHARACTERISTICS

Matrix _____	Polystyrene DVB gel
Functional groups _____	Sulphonic acid
Ionic form as shipped _____	H ⁺
Total exchange capacity ^[2] _____	≥ 1.9 eq/L (H ⁺ form)
Moisture holding capacity ^[1] _____	49 to 55 % (H ⁺ form)
Ionic conversion ^[1] _____	99 % mini H ⁺

^[1] Contractual value

^[2] Average value calculated from statistical quality control

Test methods and SQC charts are available on request.

RECOMMENDED OPERATING CONDITIONS

Minimum bed depth _____	800 mm
Maximum operating temperature _____	120 °C
Service flow rate _____	8 to 50 BV*/h
Service velocity _____	60 m/h maximum

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

