

SYBRON

C H E M I C A L S I N C .

IMPACT™ AG1 P UPS

Advanced Anion Exchange Resin

Uniform-Particle-Size Strong Base Resin for Mixed Bed Demineralization & Condensate Polishing Applications

IMPACT™ AG1 P UPS anion resin is a premium-quality resin with high total exchange capacity, exceptional bead integrity and a distinguishable light color. It is ideally suited to the high flow rate demands commonly encountered in power plant condensate polishing systems. The bead size uniformity of this anion resin and its smaller average particle size results in rapid exchange kinetics and helps provide excellent separability when used with IMPACT CS 399 BZ cation resin.

Typical Characteristics

Ionic form as delivered	Cl ⁻
Total exchange capacity, min. as CaCO ₃	1.2 eq/l 26.2 kgr/ft ³
Water content (OH ⁻ form)	50-60%
Bead size distribution: Mean particle size	575 ±50 μm
Uniformity coefficient, max.	1.1
Total swelling (Cl ⁻ → OH ⁻), approx.	25%
Whole uncracked beads, min.	95%
Crush strength: Average, min.	350 g/bead
>200 g/bead, min.	95%
Particle density, approx.	1.10 g/ml
Shipping weight, approx.	675 g/l 42 lbs/ft ³

Operating Conditions

Maximum operating temperature:	
OH ⁻ form	60°C (140°F)
Cl ⁻ form	100°C (212°F)
pH range	0-14
Bed depth, min.	450 mm (1.5 ft)
Flow rates:	
Service/fast rinse	5-50 m/h (2-20 gpm/ft ²)
Service/condensate polishing	110-150 m/h (40-60 gpm/ft ²)
Backwash	See Figure 1
Co-current regeneration/displacement rinse	1-10 m/h (0.4-4 gpm/ft ²)
Total rinse requirement	2-5 bed volumes
Regenerant (@ ambient temp. or up to 50°C for silica removal)	4-8% NaOH

Type

Type 1
strong base anion

Matrix

Styrene-DVB gel

Functional Group

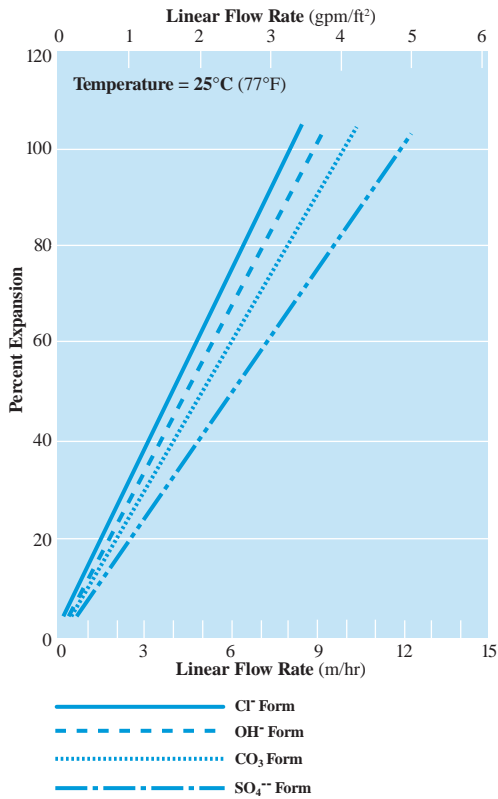
Quaternary amine

Standard Packaging

7 cubic feet
fiber drums.

Other packaging
is available.

Figure 1 Backwash Expansion Data

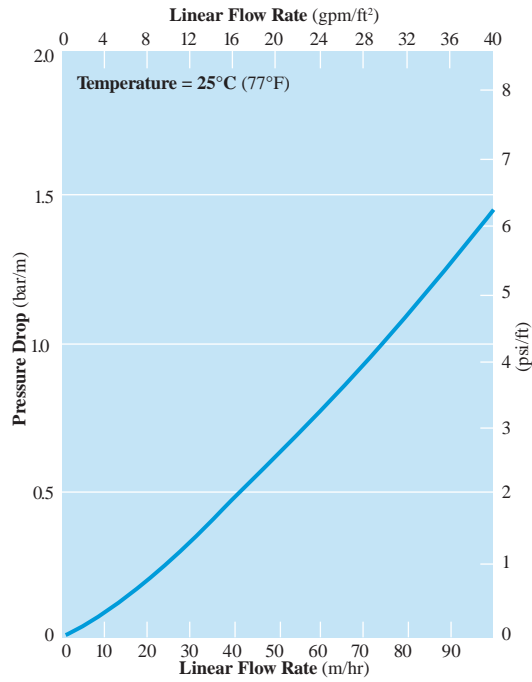


For other temperatures use:

$$F_T = F_{77°F} [1 + 0.008 (T_T - 77)], \text{ where } F \equiv \text{gpm/ft}^2$$

$$F_T = F_{25°C} [1 + 0.008 (1.8T_T - 45)], \text{ where } F \equiv \text{m/h}$$

Figure 2 Pressure Drop Data



For other temperatures use:

$$P_T = P_{20°C} / (0.026 T_c + 0.48), \text{ where } P \equiv \text{bar/m}$$

$$P_T = P_{68°F} / (0.014 T_F + 0.05), \text{ where } P \equiv \text{psi/ft}$$

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