



DOWEX SBR-P C

A Strong Base Anion Exchange Resin with Excellent Regeneration Efficiency for Condensate Polishing and Mixed Bed Demineralization Applications

Product	Type	Matrix	Functional group
DOWEX* SBR-P C	Type 1 strong base anion	Styrene-DVB gel	Quaternary amine

Guaranteed Sales Specifications		Cl ⁻ form	OH ⁻ form			
Total exchange capacity, min.	eq/L	1.2	1.0			
	kgr/ft ³ as CaCO ₃	26.2	21.9			
Water content	%	50 - 57	60 - 68			
Bead size distribution [†]						
>1.2 mm, max. (16 mesh)	%	2	5			
>0.84 mm, max. (20 mesh)	%	20	20			
<0.35 mm, max. (45 mesh)	%	1	1			
Whole uncracked beads, min.	%	95	95			
Crush strength						
Average, min.	g/bead	350	350			
> 200 g/bead, min.	%	95	95			
Ionic conversions (OH ⁻ form)	OH ⁻ 93% min.		Cl ⁻ 3% max.			
Trace metals, ppm dry resin, max. (OH ⁻ form)						
Na	Fe	Cu	Al	Mg	Ca	Heavy metals (as Pb)
50	50	10	50	50	50	10

Typical Physical and Chemical Properties		Cl ⁻ form	OH ⁻ form
Total swelling (Cl ⁻ → OH ⁻)	%	20	20
Particle density	g/mL	1.10	1.08
Shipping weight	g/L	641	641
	lbs/ft ³	40	40

Recommended 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	40-150 m/h (16-60 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:		
Type	4 - 8% NaOH	
Temperature	Ambient or up to 50°C (122°F) for silica removal	

[†] For additional particle size information, please refer to Particle Size Distribution Cross Reference Chart (Form No. 177-01775).

Typical properties and applications

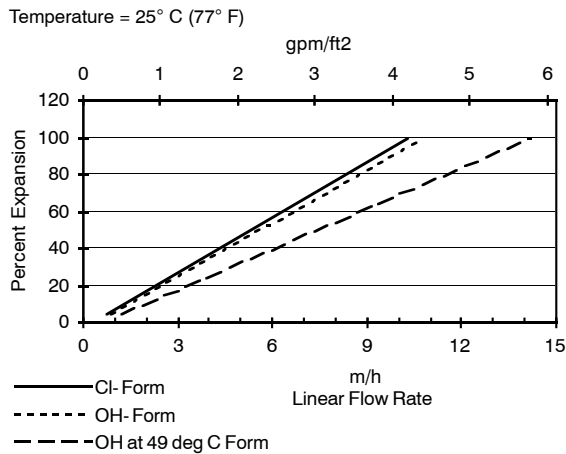
DOWEX SBR-P C strong base anion exchange resin is a high capacity resin with excellent kinetics and very good physical and chemical stability.

This resin's high porosity results in enhanced regeneration efficiency and resistance to organic fouling. The particle size distribution is designed to enhance separation and reduce pressure drop in mixed beds. DOWEX SBR-P C resin can be used in mixed beds with DOWEX HCR-W2 (H) or DOWEX HGR-W2 (H) cation resins to treat recycled condensate at up to 150 m/h (60 gpm/ft²).

Packaging

25 liter bags or 5 cubic feet fiber drums

Figure 1. Backwash Expansion Data

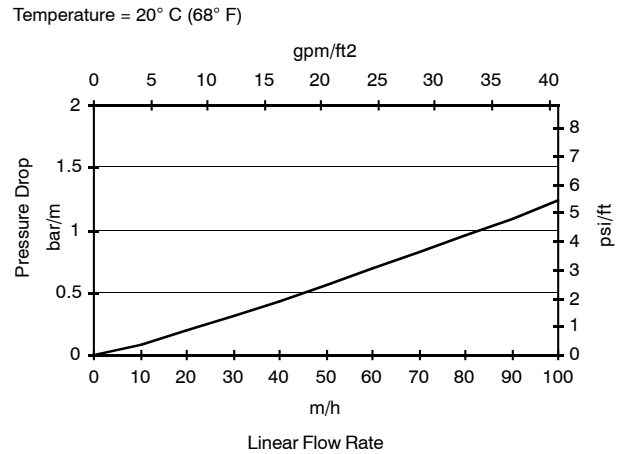


For other temperatures use:

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

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

Figure 2. Pressure Drop Data



For other temperatures use:

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

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

DOWEX Ion Exchange Resins

For more information about DOWEX resins, call the Dow Liquid Separations business:

North America: 1-800-447-4369
 Latin America: (+55) 11-5188-9222
 Europe: (+32) 3-450-2240
 Pacific: +60 3 7958 3392
 Japan: +813 5460 2100
 China: +86 21 2301 9000
<http://www.dowex.com>

Warning: Oxidizing agents such as nitric acid attack organic ion exchange resins under certain conditions. This could lead to anything from slight resin degradation to a violent exothermic reaction (explosion). Before using strong oxidizing agents, consult sources knowledgeable in handling such materials.

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