

**DOWEX™ SBR LC NG (OH)**

A High Capacity Strong Base Anion Exchange Resin Designed for CVCS and Radwaste
Demineralizers in Nuclear Power Systems

Product	Type	Matrix	Functional group
DOWEX™ SBR LC NG (OH)	Type I strong base anion	Styrene-DVB, gel	Quaternary amine

Guaranteed Sales Specifications						OH ⁻ form			
Total exchange capacity, min.			eq/L			1.2			
			kgr/ft ³ as CaCO ₃			26.2			
Water content			%			60 max.			
Bead size distribution†									
> 1,200 μm, max. (16 mesh)			%			2			
> 420 μm, max. (40 mesh)			%			1			
< 300 μm, max. (50 mesh)			%			0.2			
Whole uncracked beads, min.			%			95			
Crush strength									
Average, min.			g/bead			350			
> 200 g/bead, min.			%			95			
Ionic conversion									
OH ⁻		Cl ⁻		CO ₃ ⁻		SO ₄ ²⁻			
95% min.		0.1% max.		5% max.		0.1% max.			
Trace metals, ppm dry resin, max.									
Na	Fe	Cu	Al	Mg	Ca	Co	Pb	Hg	Heavy metals (as Pb)
40	50	10	50	50	50	30	10	10	10

Typical Physical and Chemical Properties			OH ⁻ form
Particle density		g/mL	1.08
Shipping weight**		g/L	655
		lbs/ft ³	41

Recommended Operating Conditions	• Maximum operating temperature	60°C (140°F)
	• pH range	0 - 14
	• Bed depth, min.:	
	Mixed bed	450 mm (1.5 ft)
	Single bed	800 mm (2.6 ft)

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

** As per the backwashed and settled density of the resin, determined by ASTM D-2187.

Typical properties and applications

DOWEX™ SBR LC NG (OH) resin is a high quality anion resin with very good mechanical and chemical resistance. It is supplied with a low level of residual chloride and sulfate, each less than 0.1% of exchangeable sites. The resin can be used in a variety of applications, either in single or mixed beds.

Applications include:

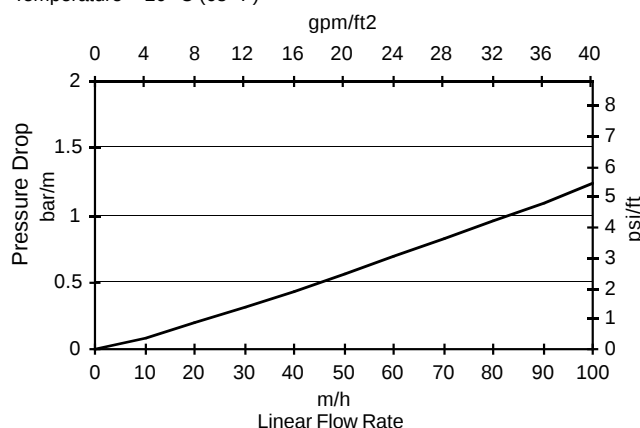
- Boric acid recovery
- Radwaste decontamination
- Reactor coolant treatment

Packaging

50 liter or 5 cubic feet fiber drums

Figure 1. Pressure Drop Data

Temperature = 20° C (68° F)



For other temperatures use:

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

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

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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