



DOWEX™ HCR-S/S

A High Capacity Cation Exchange Resin for Domestic Applications

Product	Type	Matrix	Functional group
DOWEX™ HCR-S/S	Strong acid cation	Styrene-DVB, gel	Sulfonic acid

Guaranteed Sales Specifications			Na ⁺ form
Total exchange capacity, min.	eq/L		1.9
	kg/ft ³ as CaCO ₃		41.5
Bead size distribution range†			
300 - 1,200 μm, min.	%		90
< 300 μm, max.	%		1
Whole uncracked beads, min.	%		90
Color throw, as packaged, max.	APHA		20
Acidity range	pH		7.0 - 10.5

Typical Physical and Chemical Properties			Na ⁺ form
Water content	%		48 - 52
Total swelling (Ca ⁺⁺ → Na ⁺)	%		5
Particle density	g/mL		1.30
Shipping weight	g/L		800
	lbs/ft ³		50

Recommended Operating Conditions	• Maximum operating temperature	120°C (250°F)
	• pH range	0 - 14
	• Bed depth, min.	800 mm (2.6 ft)
	• Flow rates:	
	Service/fast rinse	5 - 50 m/h (2 - 20 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	3 - 6 Bed volumes	
• Regenerant:	8 - 12% NaCl	

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

Typical Properties and Applications

DOWEX™ HCR-S/S cation exchange resin is a high capacity resin with excellent kinetics and good physical, chemical and thermal stability. DOWEX HCR-S/S is used for domestic applications in the co-current mode of regeneration. For counter-current regeneration, DOWEX HCR-S/S CR is available.

Packaging

25 liter bags or 1 cubic foot bags

Figure 1. Backwash Expansion Data

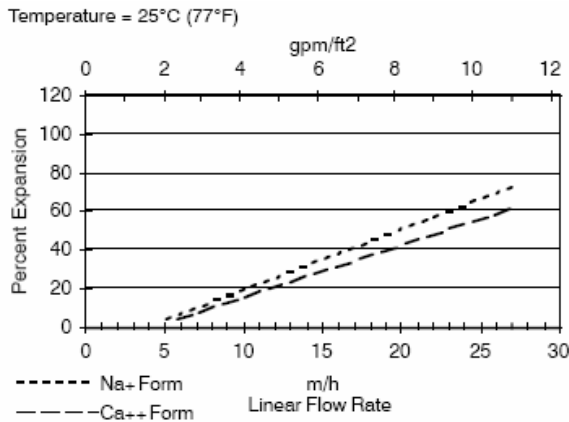
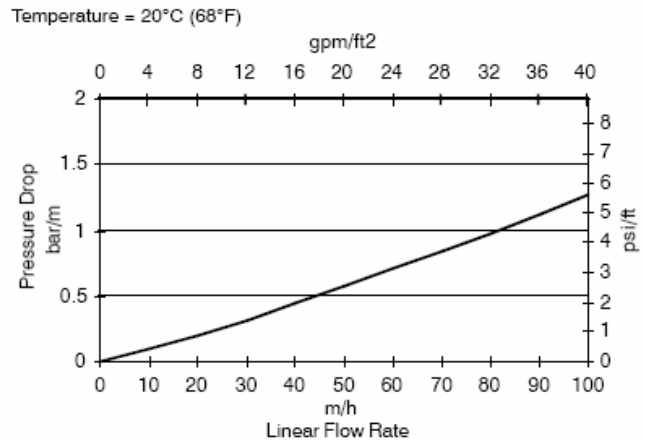


Figure 2. Pressure Drop Data



For other temperatures use:

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

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

For other temperatures use:

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

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

Note: These resins may be subject to drinking water application restrictions in some countries: please check the application status before use and sale.

DOWEX™ Ion Exchange Resins

For more information about DOWEX resins, call the Dow Water Solutions 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.

Notice: No freedom from any patent owned by Seller or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other governmental enactments. Seller assumes no obligation or liability for the information in this document. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.

