



DOWEX HCR-S/S

LENNTECH

info@lenntech.com Tel. +31-152-610-900

www.lenntech.com Fax. +31-152-616-289

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
	kgr/ft ³ as CaCO ₃	41.5
Bead size distribution range [†]	0.3 - 1.2 mm, min.	90
	<0.3 mm, max.	1
Whole uncracked beads, min.	%	90
Color throw, as packaged, max.	APHA	20
Acidity range	pH	7.0 - 9.5

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 the Particle Size Distribution Cross Reference Chart (Form No. 177-01775/CH 171-476-E).

*Trademark of The Dow Chemical Company

DOWEX Ion Exchange Resins

Typical properties and applications: Packaging

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.

25 liter bags or 1 cubic foot bags.

Figure 1. Backwash Expansion Data

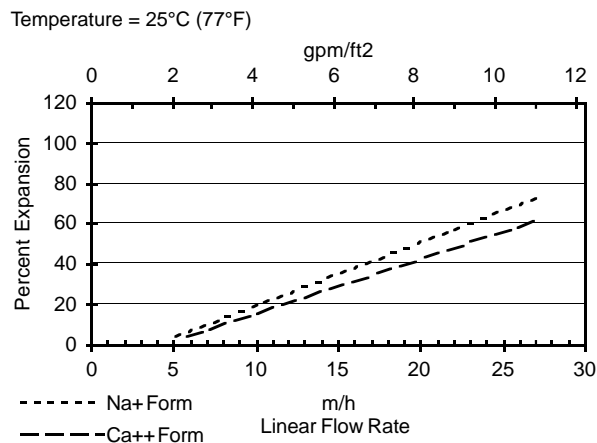
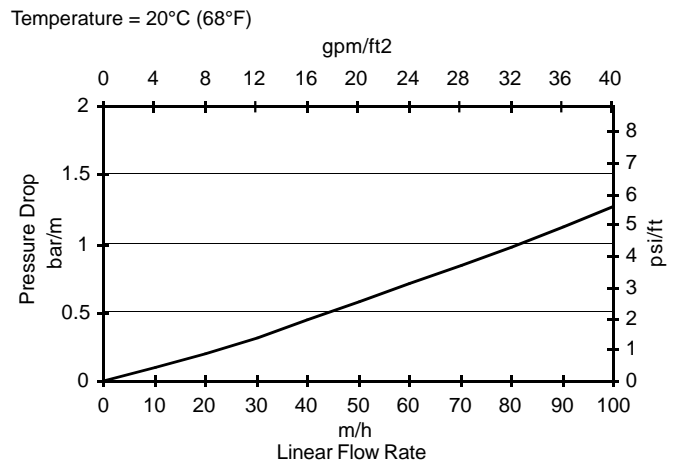


Figure 2. Pressure Drop Data



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:

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

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

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.

Published April 2002.

