



DOWEX G-26 (H)

Uniform Particle Size Strong Acid Cation Exchange Resin for Specialty Demineralization and Catalyst Applications

Product	Type	Matrix	Functional group
DOWEX [®] G-26 (H)	Strong acid cation	Styrene-DVB, gel	Sulfonic acid

Guaranteed Sales Specifications			H ⁺ form		
Total exchange capacity, min.		eq/L	2.0		
Water content		%	45 - 52		
Bead size distribution [†]					
Mean particle size		μm	650 ± 50		
Uniformity coefficient, max.			1.1		
Whole uncracked beads, min.		%	95		
Crush strength					
Average, min.		g/bead	500		
> 200 g/bead, min.		%	95		
Ionic conversion, min.		%	99.7		
Trace metals, ppm dry resin, max.					
Na	Fe	Cu	Al	Heavy metals (as Pb)	
100	50	50	50	20	

Low metals content make this product ideal for catalyst applications.

Typical Physical and Chemical Properties			H ⁺ form		
Total swelling (Na ⁺ → H ⁺)		%	7		
Particle density		g/mL	1.22		
Shipping weight		g/L	800		
		lbs/ft ³	49		

Recommended Operating Conditions

- Maximum operating temperature 130°C (265°F)
- pH range 0 - 14
- Bed depth, min. 450 mm (1.5 ft)
- Flow rates:
 - Service/fast rinse 5 - 150 m/h (2 - 60 gpm/ft²)
 - Backwash See Figure 1
 - Regeneration/displacement rinse 1 - 10 m/h (0.4 - 4 gpm/ft²)
- Total rinse requirement 3 - 6 bed volumes
- Regenerant 1 - 10% H₂SO₄ or 4 - 8% HCl

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

Typical Properties and Applications

DOWEX G-26 (H) cation exchange resin is a high performance, uniform particle size, gel resin. It is uniquely suited to the stringent demands of the chemical processing industry due to its high strength, toughness, and oxidative stability. DOWEX G-26 has excellent crush strength to withstand the osmotic shock conditions encountered during solvent exchanges. DOWEX G-26 has low levels of extractables and color throw, important for organic solvent applications where these components can be extracted into the product.

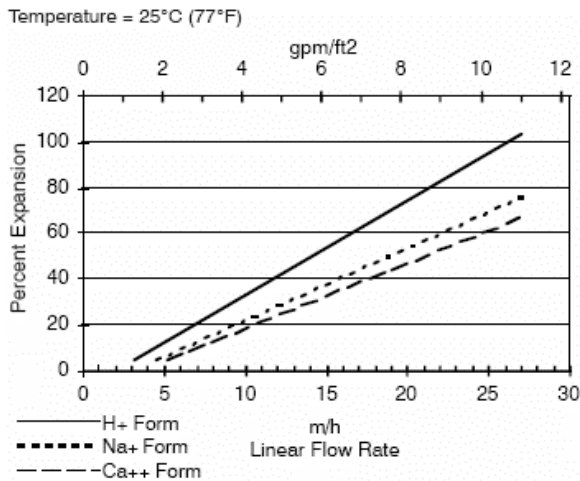
Drying

DOWEX G-26 is sold water wet. In order for good contact with organic solvents for demineralization, metals removal and catalysis, DOWEX G-26 needs to be dried. It can be dried in a conventional or convection oven at 100°C or a vacuum oven. Drying can be monitored by weight change or moisture analysis of the DOWEX G-26 cation exchange resin.

Packaging

5 cubic foot fiber drums

Figure 1. Backwash Expansion Data

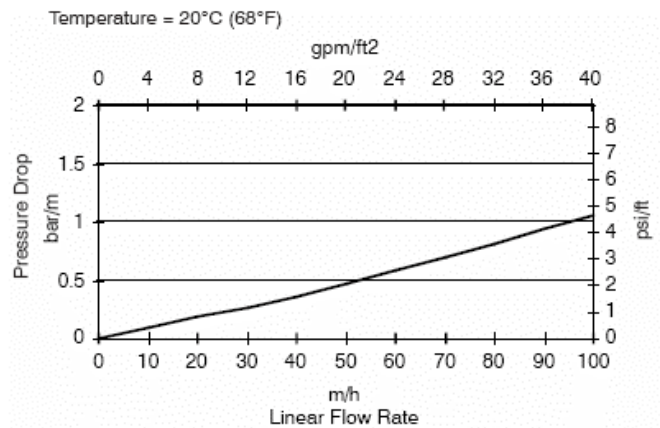


For other temperatures use:

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

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

Figure 2. Pressure Drop Data



For other temperatures use:

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

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

DOWEX Ion Exchange Resins

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

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<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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