



DOWEX™ MONOSPHERE™ 575C NG (H)

A Uniform Particle Size Strong Acid Cation Exchange Resin for Steam Generator Blowdown, Reactor Water Clean-up and Other Nuclear Water Applications

Product	Type	Matrix	Functional group
DOWEX™ MONOSPHERE™ 575C NG (H)	Strong acid cation	Styrene-DVB gel	Sulfonic acid

Guaranteed Sales Specifications			H ⁺ form				
Total exchange capacity, min.	eq/L		2.3				
	kgr/ft ³ as CaCO ₃		50.3				
Water content	%		41 – 46				
Bead size distribution†							
Mean particle size	μm		550 ± 50				
Uniformity coefficient, max.			1.1				
>800μ, max.	%		3				
<300μ, max.	%		0.2				
Whole uncracked beads, min.	%		95				
Crush strength							
Average, min.	g/bead		500				
> 200 g/bead	%		95				
Ionic conversion, min.	%		99.7				
Trace metals, ppm dry resin, max.							
Na	Fe	Cu	Al	Co	Pb	Hg	Heavy metals (as Pb)
50	50	10	50	30	10	10	10

Typical Physical and Chemical Properties

Total swelling (Na ⁺ → H ⁺)	%	7
Particle density	g/mL	1.25
Shipping weight**	g/L	800
	lbs/ft ³	50

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	5-60 m/h (2-24 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	3 – 6 Bed volumes	
• Regenerant	1-10% H ₂ SO ₄ or 4-8% HCl	

† 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™ MONOSPHERE™ 575C NG (H) is a high-capacity, uniform particle size gel cation exchange resin with outstanding purity and performance.

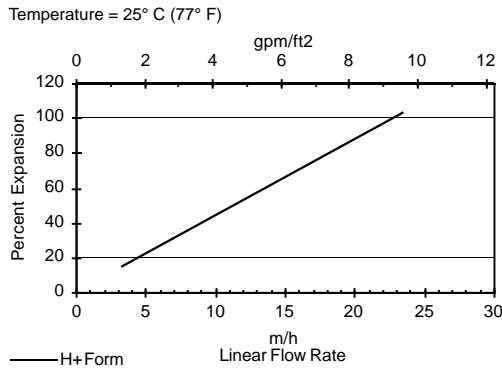
This resin is supplied with a minimum of 99% of ionic sites in the H⁺ form. It also has excellent physical and chemical stability and low metallic impurity levels.

DOWEX MONOSPHERE 575C NG (H) resin can be used as a single resin or in mixed beds together with DOWEX MONSPHERE 550A LC NG (OH) anion exchange resin.

Packaging

50 liter or 5 cubic feet fiber drums

Figure 1. Backwash Expansion Data

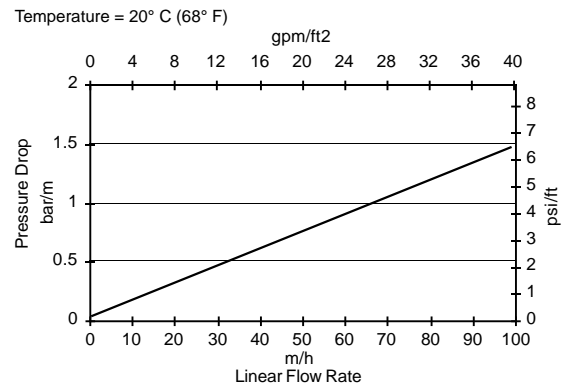


For other temperatures use:

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

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

Figure 2. Pressure Drop Data



For other temperatures use:

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

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

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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