



## 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 <sup>+</sup> form				
Total exchange capacity, min.	eq/L		2.3				
	kgr/ft <sup>3</sup> as CaCO <sub>3</sub>		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 <sup>+</sup> → H <sup>+</sup> )	%	7
Particle density	g/mL	1.25
Shipping weight**	g/L	800
	lbs/ft <sup>3</sup>	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 <sup>2</sup> )
	Service/condensate polishing	40-150 m/h (16-60 gpm/ft <sup>2</sup> )
	Backwash	See figure 1
	Co-current regeneration/displacement rinse	1-10 m/h (0.4-4 gpm /ft <sup>2</sup> )
• Total rinse requirement	3 – 6 Bed volumes	
• Regenerant	1-10% H <sub>2</sub> SO <sub>4</sub> 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.

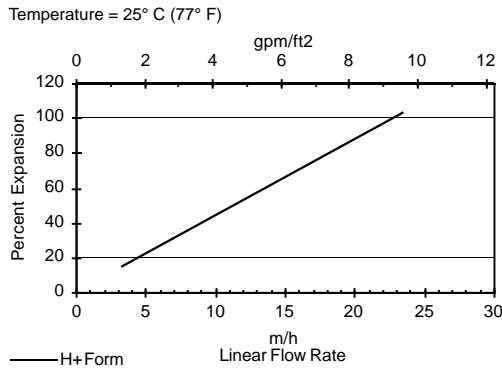
This resin is supplied with a minimum of 99% of ionic sites in the H<sup>+</sup> form. It also has excellent physical and chemical stability and low metallic impurity levels.

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

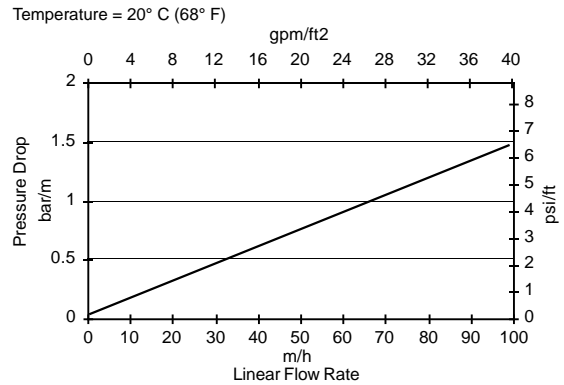


For other temperatures use:

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

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

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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