



## 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 <sup>†</sup>							
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

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

## 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.

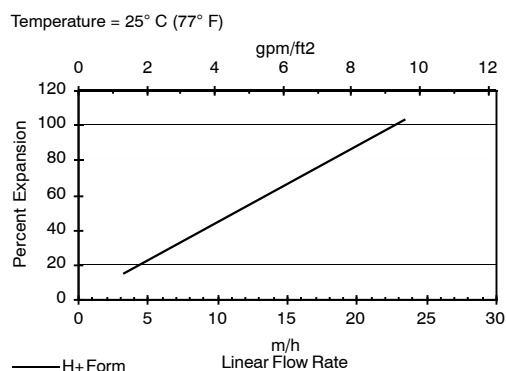
This resin is supplied with a minimum of 99% of ionic sites in the H<sup>+</sup> form. It also has excellent physical and chemical stability and low metallic impurity levels.

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

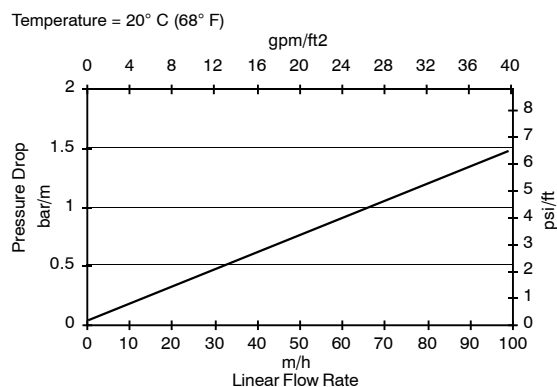


### For other temperatures use:

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

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

Figure 2. Pressure Drop Data



### For other temperatures use:

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

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

## DOWEX Ion Exchange Resins

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

North America: 1-800-447-4369  
 Latin America: (+55) 11-5188-9222  
 Europe: (+32) 3-450-2240  
 Pacific (ex. China): +800-7776-7776  
 China: +10-800-600-0015  
<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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