



## DOWEX™ MONOSPHERE™ 600BB Inert Resin

Uniform Particle Size Inert Resin for Mixed Bed Demineralization and  
Condensate Polishing Applications

For the Power Industry

### Description

DOWEX™ MONOSPHERE™ 600BB Inert Resin is a non-functionalized resin used to enhance separation of mixed beds during regeneration. Its density is between the densities of strong acid cation exchange resin and strong base anion exchange resin. It also has a tightly controlled, uniform particle size. These combined properties help ensure the terminal settling velocity is intermediate to that of the cation and anion resins creating an inert "Buffer Zone" between the functional resins following backwash. Separation of the two functional components of a mixed bed reduces the risk of crosshyphenate cross-regeneration improving water quality and reducing rinse time.

### Typical Physical and Chemical Properties

Physical form		White uniform opaque beads
Matrix		Styrene-DVB-acrylate terpolymer
Functional group		None
Particle size distribution		
Harmonic mean diameter	μm	550–650
Uniformity coefficient, max.		1.1
Specific gravity @ 77°F	g/mL	1.14–1.16
Particle density	g/mL	1.15
Shipping density**	g/L lbs/ft <sup>3</sup>	670 42

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

### Suggested Operating Conditions

Maximum operating temperature	60°C / 140°F
pH range	0–14
Bed depth, min.	150 mm (0.5 ft)

\*1 BV (Bed Volume) = 1 m<sup>3</sup> solution per m<sup>3</sup> resin or 7.5 gals per ft<sup>3</sup> resin

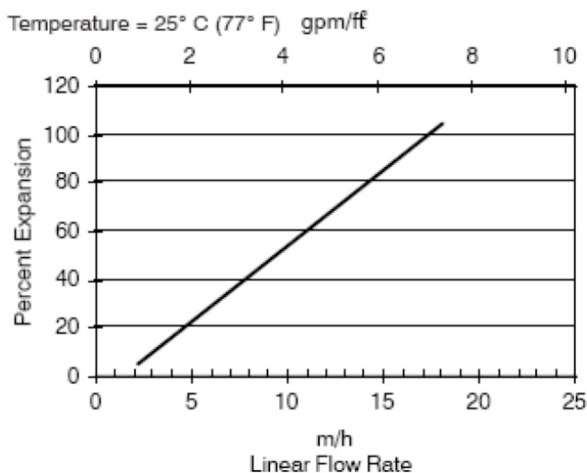
### Packaging

25 liter bags or 5 cubic feet fiber drums

## Hydraulic Characteristics

Figure 1 shows the bed expansion of DOWEX™ MONOSPHERE™ 600BB Inert Resin as a function of backwash flow rate and water temperature.

**Figure 1. Backwash Expansion Data**



**For other temperatures use:**

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

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

## Product Stewardship

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## DOW™ Ion Exchange Resins

For more information about DOW™ resins, call the Dow Water & Process Solutions business:

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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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