Product Data Sheet

DOWEX MONOSPHERE™ 600i Inert Resin

for use in condensate polishing systems and other high purity mixed beds

Description

DOWEX MONOSPHERE™ 600i Inert Resin is a non-functionalized resin used to enhance separation of cation and anion exchange resins prior to regeneration. While the primary application for DOWEX MONOSPHERE 600i is in condensate polishing systems for the electrical power generation industry, it can also be used in other high purity mixed bed systems such as those used to make ultrapure water for the manufacture of electronic components. Its density and particle size are tightly controlled to facilitate the terminal settling velocity is intermediate to those of the cation exchange resin and anion exchange resin, creating an inert zone between the functional resins. This inert zone reduces the risk of cross-regeneration, improving water quality and rinse time whether it is used in internally or externally regenerated mixed bed systems.

Typical Physical and Chemical Properties

Matrix	Cross-linked acrylate polymer
Physical Form	Brown opaque spherical beads
Functional Group	None
Particle Size Distribution	
Particle Diameter [b]	550 – 650 µm
Uniformity Coefficient	≤ 1.2
Particle Density	1.10 – 1.20 g/mL
Bulk Density, as Shipped [c]	705 g/L

[b] For additional particle size information, please refer to the Particle Size Distribution Cross Reference Chart (Form No. 177-01775).
[c] 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 (6 in)

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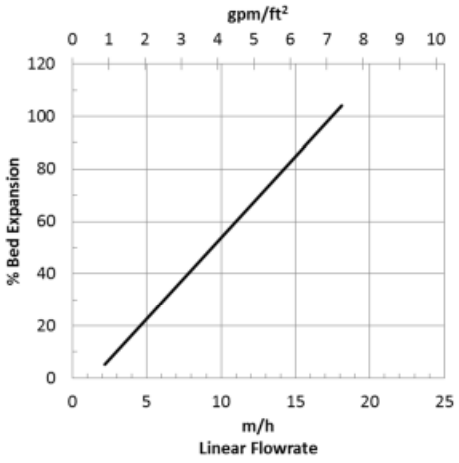
Hydraulic Characteristics

Bed expansion of DOWEX MONOSPHERE™ 600i Inert Resin as a function of backwash flowrate at 25°C (77°F) is shown in Figure 1. The flowrate necessary to achieve a desired bed expansion for other water temperatures can be calculated with the provided equations.

Figure 1: Backwash Expansion



For other temperatures use:

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

$F_T = F_{77°F} [1 + 0.008 (T_{°F} - 77)]$, where F ≡ gpm/ft²

Packaging

- 25 liter bags
- 200 liter drums

Product Stewardship

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products—from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

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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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