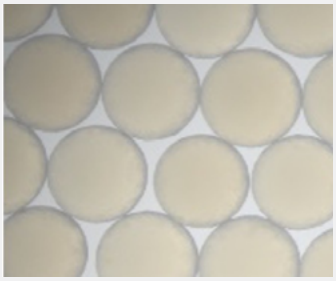
DuPont™ AmberLite™ 600BB Inert Resin

Uniform Particle Size, Gel white inert resin Buffer Beads for interface separation in mixed beds for industrial water polishing

Description

DuPont™ AmberLite™ 600BB inert resin is a non-functionalized, spherical resin used in mixed beds, also called Buffer Beads. Its density and particle size are tightly controlled to have a terminal settling velocity that is intermediate to those of the cation exchange resin and anion exchange resin, creating an inert zone between the functional resins wherein the regenerant is collected. 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.



AmberLite™ 600BB is used in condensate polishing systems for the electrical power generation industry and in other high-purity mixed bed systems.

AmberLite™ 600BB is intended for use in regenerable mixed bed systems which are designed to operate in three components and demand the ultimate in effluent purity. The particle size and density of AmberLite™ 600BB inert resin are specifically designed to locate the interface resin exactly between the cation and anion resin beds, after a careful backwash with water.

Applications

- Regenerable mixed beds in CPP operation in the power industry
- Ultra-Pure water polishing for the semiconductors industry.
- Industrial Utility Water 3 components polishing mixed bed.

AmberLite™ 600BB inert Resin is specially designed to be perfectly located between the cation and anion beds, as a thin visible white layer to allow the regeneration of both anion & cation resin beds, with the minimum cross-contamination. The use of AmberLite 600BB is particularly recommended with the following cation & anion resin combinations:

	AmberLite™ HPR4700 OH	AmberLite™ HPR550 Cl or OH	AmberTec™ UP550 OH	AmberLite™ HPR900 SO4 or OH	AmberLite™ HPR9000 SO4 or OH
AmberLite™ HPR1300	P			P	
AmberLite™ HPR650 H		P		A	P
AmberTec™ UP650 H			P		
AmberLite™ HPR1600 H		P		A	P
AmberLite™ HPR252 H				P	A
AmberLite™ HPR2000 H				A	P

(P) Preferred combination (A) Acceptable combination

Form No. 45-D04716-en, Rev. 0
January 2024

Typical Properties

Physical Properties	
Copolymer	Acrylic
Matrix	Gel
Type	Interface separator buffer beads
Functional Group	Inert
Physical Form	white, translucent to milky, spherical beads

Particle Size §	
Particle Diameter	600 - 750 µm
Uniformity Coefficient	≤ 1.20
< 425 µm	≤ 2.0 %
> 850 µm	≤ 2.0 %

§ For additional particle size information, please refer to the Particle Size Distribution Cross Reference Chart (Form No. 45-D00954-en).

Density	
Ionic Form as Shipped	Inert
Particle Density (g/ml)	1.05 – 1.16
Shipping Weight	650 g/L

Stability	
Temperature Range (H+ form)	5 – 150°C (41 – 302°F)
pH Range (Stable)	0 – 14

Suggested Operating Conditions

For additional information regarding recommended minimum bed depth, operating conditions, and regeneration conditions for mixed beds (Form No. 45-D01127-en), please refer to our Tech Facts.

Hydraulic Characteristics

Estimated bed expansion of DuPont™ AmberLite™ 600BB Inert Resin as a function of backwash flowrate and temperature is shown in Figure 1.

Estimated pressure drop for AmberLite™ 600BB Inert Resin as a function of service flowrate and temperature is shown in Figure 2. These pressure drop expectations are valid at the start of the service run with clean water.

Figure 1. Backwash Expansion
Temperature = 10 – 60°C (50 – 140°F)

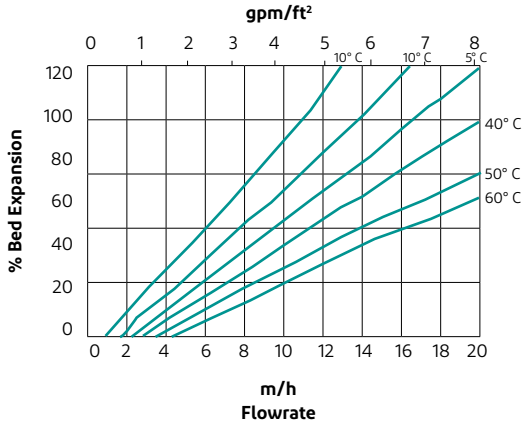
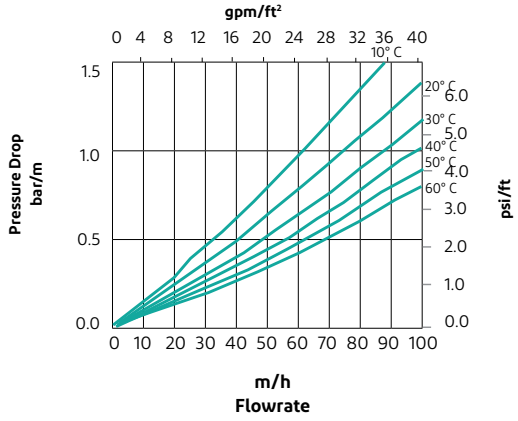


Figure 2. Pressure Drop
Temperature = 10 – 60°C (50 – 140°F)



Product Stewardship

DuPont 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 DuPont products—from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Regulatory Note

DuPont strongly encourages its customers to review both their manufacturing processes and their applications of DuPont products from the standpoint of human health and environmental quality to ensure that DuPont products are not used in ways for which they are not intended or tested.

DuPont personnel are available to answer your questions and to provide reasonable technical support. DuPont product literature, including safety data sheets, should be consulted prior to use of DuPont products. Current safety data sheets are available from DuPont.

Please be aware of the following:

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.

DUPONT™

Have a question? Contact us at:
dupont.com/water/contact-us

Form No. 45-D04716-en, Rev. 0
January 2024