Product Data Sheet

AMBERSEP™ 400 SO_4 Ion Exchange Resin

Industrial-grade Strong Base Anion Exchanger

Description

AMBERSEP™ 400 SO_4 Ion Exchange Resin is a gel, Type I strong basic anion exchange resin with outstanding performance for uranium recovery. Its excellent selectivity for the uranyl sulfate ion over other anions, high operating capacity, excellent mechanical and physical stability, and its resistance to fouling make it the resin of choice. AMBERSEP™ 400 SO_4 is well-suited for the recovery of uranium from sulfuric acid leach systems using fixed beds, *in situ* leaching, fluidized beds, or Resin In Pulp (RIP) applications.

AMBERSEP™ 400 SO_4 is supplied in the sulfate form in order to minimize the presence of chloride upon start-up.

If used in sulfuric acid leach systems, no preconditioning of this resin is required and the resin can be used as supplied.

Applications

- Uranium extraction from sulfuric acid leach systems
  - Fixed beds
  - *In situ* leaching
  - Fluidized beds
  - Resin In Pulp (RIP) systems

Typical Properties

Physical Properties	
Copolymer	Styrene-divinylbenzene
Matrix	Gel
Type	Strong base anion, Type I
Functional Group	Trimethylammonium
Physical Form	Amber, translucent, spherical beads
Chemical Properties	
Ionic Form as Shipped	SO_4^{2-}
Total Exchange Capacity	≥ 1.40 eq/L (Cl^- form)
Water Retention Capacity	40 – 47% (Cl^- form)
Particle Size [§]	
Particle Diameter	600 – 750 µm
Uniformity Coefficient	≤ 1.60
< 500 µm	≤ 1.0%
> 1180 µm	≤ 5.0%
Density	
Shipping Weight	730 g/L

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

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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.

Customer Notice

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.

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