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AMBERLITE™ IRN217 Resin
Li⁷/OH Nuclear Grade Mixed Bed Resin

For the Power Industry

Description

AMBERLITE™ IRN217 is a high purity mixed bed resin of uniform particle size gel polystyrene cation and anion exchange resins. It is supplied as a stoichiometric equivalent mixture of a fully converted strong acid cation resin in the Lithium (Li7) form, together with a strong base anion exchange resin in OH form.

The resin exhibits high capacity and excellent resistance to bead fracture from attrition andosmotic shock.

AMBERLITE IRN217 is designed to be used in primary water chemistry control in PWR nuclear power operations.

Typical Physical and Chemical Properties

Physical form		Uniform particle size spherical beads	
Matrix		Styrene divinylbenzene copolymer	
		Cation resin	Anion resin
Functional group		Sulphonic acid	Trimethylammonium
Ionic form as shipped		$^{7}Li^{+}$ form	OH^{-} form
Total volume capacity, min.	eq/L kgr/ft³ as $CaCO_3$	1.75 38.2	1.2 26.2
Strong base capacity, min.	%	—	90
Moisture retention capacity	%	43–51	54–60
Particle size			
Harmonic mean diameter	mm	0.65 ± 0.05	0.630 ± 0.05
Uniformity coefficient, max.		1.2	
< 0.300 mm, max.	%	0.2	
Whole beads, min.	%	98	
Ionic conversion, min. [1]	%	99	95
$CO_3^{=}$ max.	%	—	5
Cl^{-} max.	%	—	0.1
$SO_4^{=}$ max.	%	—	0.1
Shipping density**	g/L lbs/ft³	690 43	

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

 Form No. 177-02264-0311, Rev. 0

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

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

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.

DOW™ Ion Exchange Resins

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