

Product Information

DIAION™ USMN3

DIAION™ USMN3 is a nuclear grade mixed resin with strongly acidic cation exchange resin, DIAION™ UBKN3, with ⁷Li form and strongly basic anion exchange resin, DIAION™ UBAN1. It is used for cleanup system in primary circuit of PWR nuclear power plants.

Product

Grade Name	DIAION™ USMN3
Type	Mixed
Matrix	Styrene-DVB, Gel
Functional Group	Sulfonic acid / Type I (trimethyl ammonium groups)
Ionic Form	⁷ Li ⁺ / OH ⁻
Chemical Equivalent Ratio	1 / 1

Specification

Component		Cation Exchange Resin		Anion Exchange Resin	
		DIAION™ UBKN3		DIAION™ UBAN1	
Salt Splitting Capacity	meq/mL	2.4 min.		1.1 min.	
Particle Size Distribution 425 - 1180 μm	%	95 min.		95 min.	
Particle Size Distribution thr. 425 μm	%	1.0 max.		1.0 max.	
Mean Particle Size	μm	600 - 730		580 - 680	
Ionic Form Conversion ⁷ Li Form	eq%	99 min.		-	
Ionic Form Conversion Na Form	eq%	0.1 max.		-	
Ionic Form Conversion OH Form	eq%	-		95 min.	
Ionic Form Conversion CO ₃ Form	eq%	-		5 max.	
Ionic Form Conversion Cl Form	eq%	-		0.2 max.	
Metal Content (Ca)	mg/L	50 max.		50 max.	
Metal Content (Pb)	mg/L	10 max.		10 max.	
Metal Content (Fe)	mg/L	50 max.		50 max.	
Metal Content (Cu)	mg/L	10 max.		10 max.	
Water Extractables	g/L-R	0.5 max.		0.1 max.	

Recommended Operating Conditions

Maximum Operating Temperature		60
Operating pH Range		0 - 14
Minimum Bed Depth	mm	800
Service Flow Rate	m/h	10 - 60

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