Product Data Sheet
DIAION™ USMN1

DIAION™ USMN1 is a nuclear grade mixed resin with strongly acidic cation exchange resin, DIAION™ UBKN1, and strongly basic anion exchange resin, DIAION™ UBAN1. It is used for cleanup system in primary circuit, cleanup system SFP, radwaste, etc.

Product

Grade Name	DIAION™ USMN1
Type	Mixed
Matrix	Styrene-DVB, Gel
Functional Group	Sulfonic acid / Type I (trimethyl ammonium groups)
Ionic Form	H^+ / OH^-
Chemical Equivalent Ratio	1 / 1

Specification

Component		Cation Exchange Resin DIAION™ UBKN1	Anion Exchange Resin DIAION™ UBAN1
Whole Bead Count	-	90 min.	-
Salt Splitting Capacity	meq/mL	2.4 min.	1.2 min.
Particle Size Distribution on 1180 µm	%	-	0.5 max.
Particle Size Distribution thr. 425 µm	%	1.0 max.	1.0 max.
Particle Size Distribution 425 - 1180 µm	%	95 min.	-
Mean Particle Size	µm	650 ± 50	630 ± 50
Uniformity Coefficient	-	-	1.2 max.
Ionic Form Conversion H 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	0.1 max.	0.1 max.

Typical Properties

Component		Mixed Resin
Shipping Density	g/L	730

Recommended Operating Conditions

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

Product Data Sheet

DIAION™ USMN1

Hydraulic Characteristics

The approximate pressure drop at various temperatures and flow rates for each meter of bed depth of DIAION™ USMN1 resin in normal down flow operation is shown in the graphs below.
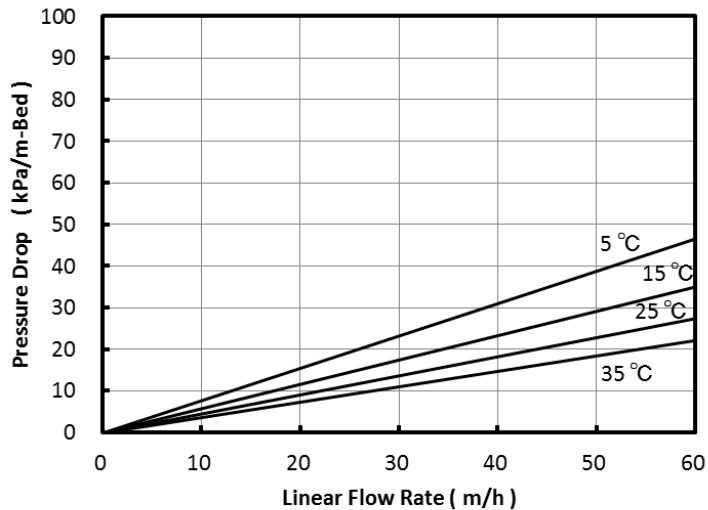

Fig. 1 Pressure Drop of USMN1

Notice

This information are given in good faith but without warranty, and this also applies where proprietary rights of third parties are involved. The application, use and processing of our products are beyond our control and therefore your own responsibility.