

Product Data Sheet

DIAION™ CRBT03

DIAION™ CRBT03 is a low-leachable glucamine type chelating resin. It has a high selectivity for borate ion. It is recommended for borate removal from high purity water treatment including ultrapure water.

Product

Grade Name	DIAION™ CRBT03	
Type	Chelating Resin	
Matrix	Styrene-DVB, Highly Porous	
Chemical Structure		
Functional Group	N-Methyl Glucamine	
Ionic Form	Free Base	

Specification

Whole Bead Count	-	95 min.
Total Exchange Capacity	meq/mL	0.8 min.
Water Content	%	45 - 55
Particle Size Distribution on 850 μm	%	10 max.
Particle Size Distribution thr. 300 μm	%	1 max.
Effective Size	mm	0.35 - 0.55
Uniformity Coefficient	-	1.6 max.
Adsorption Isotherm of Boric Acid	mg/mL-R	12 min.
ΔTOC	ppb	30 max.

Typical Properties

Shipping Density	g/L	670
Mean Particle Size	μm	540
Particle Density	g/mL	1.09
Total Swelling (FB to Cl ⁻)	%	17

DIAION™ CRBT03**Recommended Operating Conditions**

Maximum Operating Temperature	°C	100
Effective pH Range		6 - 10
Minimum Bed Depth	mm	800
Service Flow Rate	BV/h	5 - 20
Eluate		HCl
		H ₂ SO ₄
Eluate Concentration	%	HCl 2 - 4
		H ₂ SO ₄ 1 - 5
Eluate Level	g/L	50 - 100
Eluate Flow Rate	BV/h	1 - 3
Regenerant		NaOH
Regenerant Concentration	%	NaOH 2 - 4
Regenerant Level	g/L	20 - 40
Regenerant Flow Rate	BV/h	1 - 3
Total Rinse Requirement	BV	10 - 20

1 BV(Bed Volume)=1 m³/m³-resin

Hydraulic Characteristics

The approximate pressure drop at various temperatures and flow rates for each meter of bed depth of DIAION™ CRBT03 resin in normal down flow operation is shown in the graphs below.

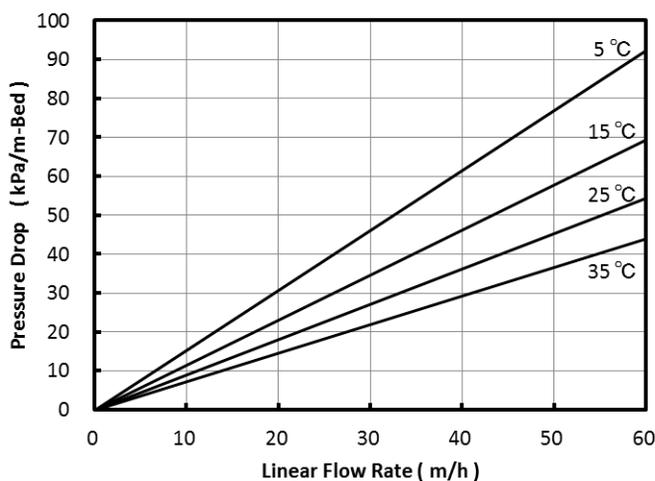


Fig. 1 Pressure Drop of CRBT03

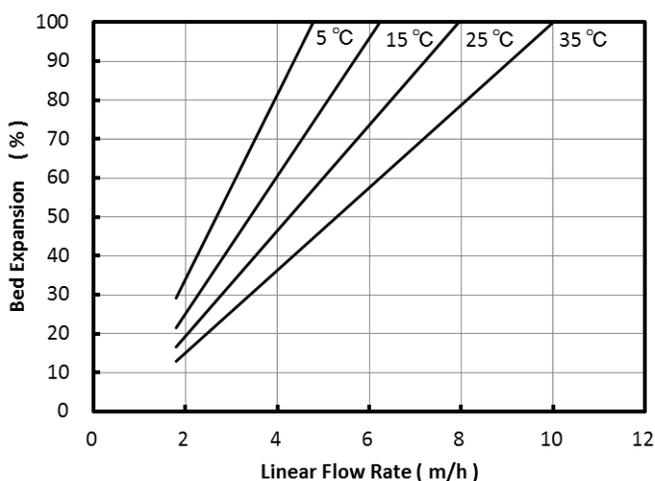


Fig. 2 Bed Expansion of CRBT03

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