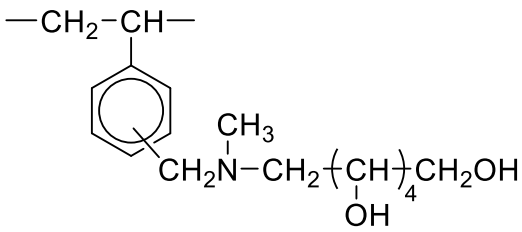
Product Data Sheet

DIAION™ CRB05

DIAION™ CRB05 is a glucamine type chelating resin. It has a high selectivity for borate ion and higher capacity than DIAION™ CRB03. It is recommended for borate separation process from various solutions, including brines, sea water and wastewater.

Product

Grade Name	DIAION™ CRB05
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	0.95 min.
Water Content	%	43 - 53
Particle Size Distribution on 850 µm	%	10 max.
Particle Size Distribution thr. 300 µm	%	1 max.
Effective Size	mm	0.35 min.
Uniformity Coefficient	-	1.6 max.

Typical Properties

Shipping Density	g/L	750
Mean Particle Size	µm	550
Adsorption Isotherm of Boric Acid	mg/mL-R	25
Particle Density	g/mL	1.13
Total Swelling (FB to Cl^-)	%	11

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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_2SO_4
Eluate Concentration	%	HCl 2 - 4
		H_2SO_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 m^3/m^3-resin

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Hydraulic Characteristics

The approximate pressure drop at various temperatures and flow rates for each meter of bed depth of DIAION™ CRB05 resin in normal down flow operation is shown in the graphs below.

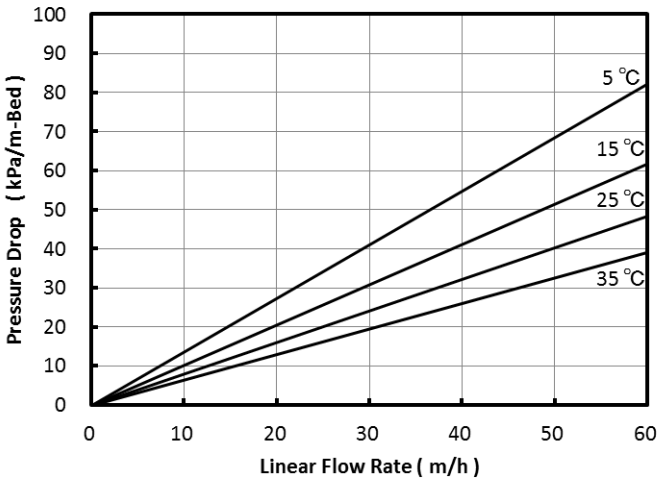

Fig. 1 Pressure Drop of CRB05

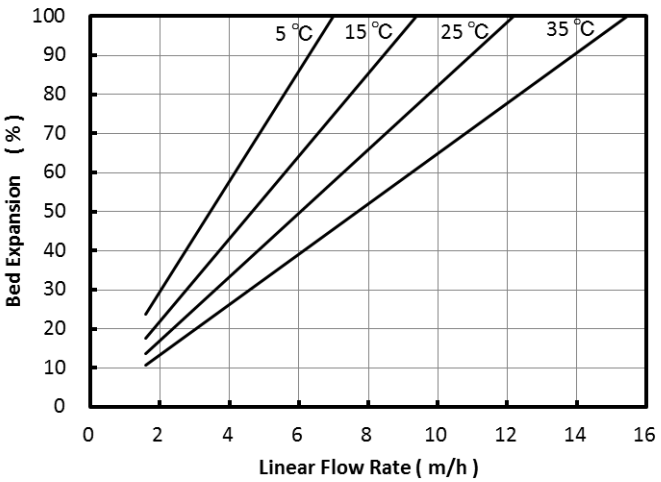

Fig. 2 Bed Expansion of CRB05

Notice