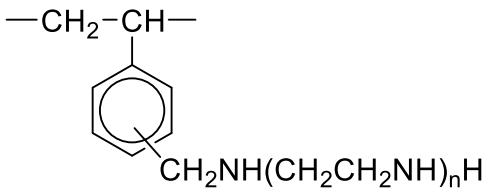
Product Data Sheet

DIAION™ CR20

DIAION™ CR20 is a polyamine type chelating resin. It has a high selectivity for divalent metal ions, especially transition metal elements, than monovalents. It is recommended for chemical process separations, and metals removal and recovery from waste water.

The Selectivity of DIAION™ CR20 toward metal ions :
$Hg^{2+} > Fe^{3+} > Cu^{2+} > Zn^{2+} > Cd^{2+} > Ni^{2+} > Co^{2+} > Ag^{+} > Mn^{2+}$

Product

Grade Name	DIAION™ CR20
Type	Chelating Resin
Matrix	Styrene-DVB, Highly Porous
Chemical Structure	
Functional Group	Polyamine
Ionic Form	Free Base

Specification

Whole Bead Count	-	95 min.
Cu Adsorption Capacity	mmol/mL	0.4 min.
Water Content	%	50 - 60
Particle Size Distribution on 1180 µm	%	5 max.
Particle Size Distribution thr. 300 µm	%	1 max.
Effective Size	mm	0.40 min.
Uniformity Coefficient	-	1.6 max.

Typical Properties

Shipping Density	g/L	640
Mean Particle Size	µm	570
Particle Density	g/mL	1.05
Total Swelling (FB to Cl^-)	%	10

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Recommended Operating Conditions

Maximum Operating Temperature	°C	100
Effective pH Range		4* - 10**
Minimum Bed Depth	mm	800
Service Flow Rate	m/h	10 - 30
Regenerant		HCl
Regenerant Concentration	%	HCl 4 - 10
Regenerant Level	g/L	100 - 200
Regenerant Flow Rate	m/h	2 - 10
Total Rince Requirement	BV	10 - 20

*Some metal ions can be slightly adsorbed at a pH lower than 4.

**In an alkaline solutions, ions may be precipitated as hydroxides.

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Hydraulic Characteristics

The approximate pressure drop at various temperatures and flow rates for each meter of bed depth of DIAION™ CR20 resin in normal down flow operation is shown in the graphs below.

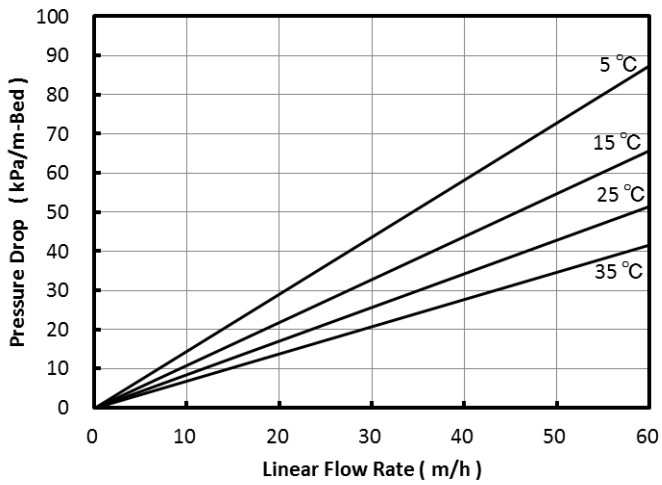

Fig. 1 Pressure Drop of CR20

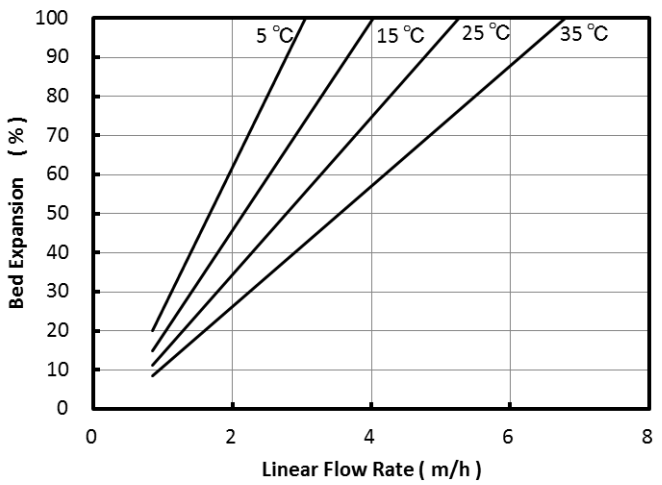

Fig. 2 Bed Expansion of CR20

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