

## 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.

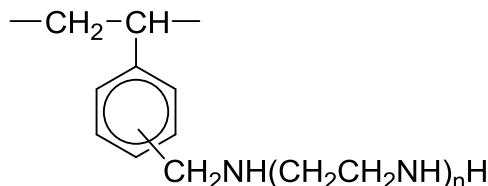
The Selectivity of DIAION™ CR20 toward metal ions :

$\text{Hg}^{2+} > \text{Fe}^{3+} > \text{Cu}^{2+} > \text{Zn}^{2+} > \text{Cd}^{2+} > \text{Ni}^{2+} > \text{Co}^{2+} > \text{Ag}^+ > \text{Mn}^{2+}$

### 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 $\mu\text{m}$	%	5 max.
Particle Size Distribution thr. 300 $\mu\text{m}$	%	1 max.
Effective Size	mm	0.40 min.
Uniformity Coefficient	-	1.6 max.

### Typical Properties

Shipping Density	g/L	640
Mean Particle Size	$\mu\text{m}$	570
Particle Density	g/mL	1.05
Total Swelling (FB to Cl)	%	10

### 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 Rinse Requirement	BV	10 - 20

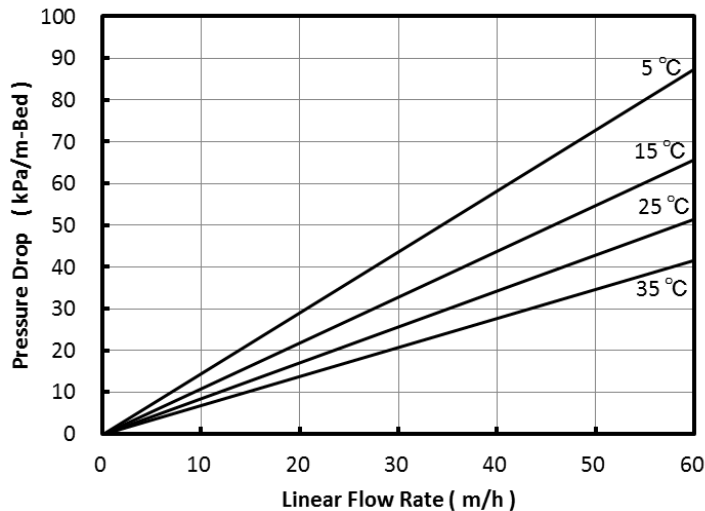
\*Some metal ions can be slightly adsorbed at a pH lower than 4.

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

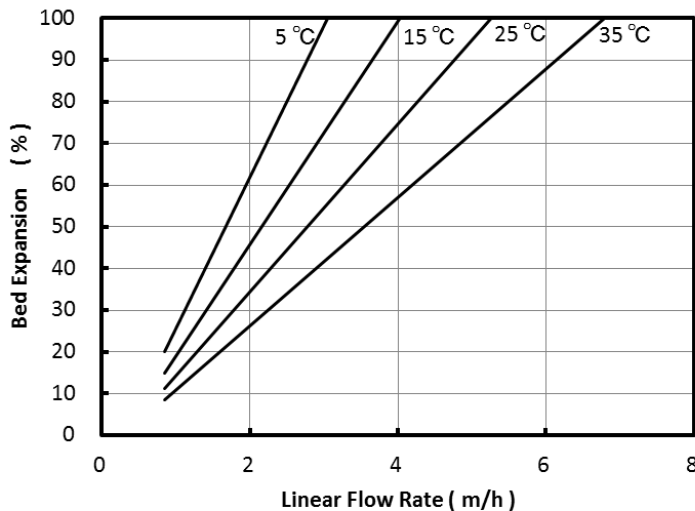


### Hydraulic Characteristics

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**

### Notice

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