

# water

## RESINDION RESINS FOR WATER TREATMENTS

TDS 12037

RELITE CRB03 - Boron Selective Resin for potable water

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### RELITE CRB03

RELITE CRB03 is a special resin developed for the selective adsorption/removal of boron from potable waters.

It is characterized by a highly porous structure that increases the reaction kinetic of boron adsorption and by a specially calibrated screen grade.

Boron is usually present as borate anion. It is taken up by the resin through the coordinate bonding between boron and oxygen atoms of the OH active groups, selectively forming a type of chelate compound. RELITE CRB03 is specifically designed for the treatment of potable waters containing low boron concentrations.

Its composition complies with the existing food processing rules and regulations.

### TYPICAL CHARACTERISTICS

Matrix	:	Highly porous copolymer styrene-DVB		
Functional group	:	N-Methylglucamine		
Colour and physical form	:	White opaque beads		
Particle size range	:	0.35 - 0.85	m m	
Uniformity Coefficient	:	1.5	max	
Ionic form at the delivery	:	Free Base		
Volume change	:	+ 5 max	% F.B. --> Salt form approx.	
Total exchange capacity	:	0.8 eq/l	min	
Water retention	:	45 - 55	%	
pH stability range	:	0 - 14		
Operating pH range	:	0 - 10		
Apparent density	:	760 - 800	g/l	
Standard packaging	:	25 or 1000	liter bags	

### RECOMMENDED OPERATING CONDITIONS

Minimum bed depth	:	800	m m		
Linear operating flowrate	:	3 - 35	m/h		
Water backwash flowrate	:	4 - 6	m/h on exhausted resin and water temp. 20°C		
Backwash expansion	:	35 - 50	%		
Regenerants	:	HCl	H <sub>2</sub> SO <sub>4</sub>	NaOH	
Regenerant level range	:	30 - 80	60 - 150	20 - 40	g/l
Concentration range	:	4 - 8	5 - 10	4 - 8	%
Slow rinse volume	:	1.5 - 2	BV		
Fast rinse volume	:	3 - 5	BV		

**Resindion** S.r.l.

A Subsidiary of  MITSUBISHI CHEMICAL

## OPERATING CAPACITY

Operating capacity depends on various parameters, such as inlet composition, endpoint, kinetic load and regenerant level.

In case of need, please contact our TECHNICAL DEPARTMENT.

Fig. 1 BED EXPANSION IN WATER

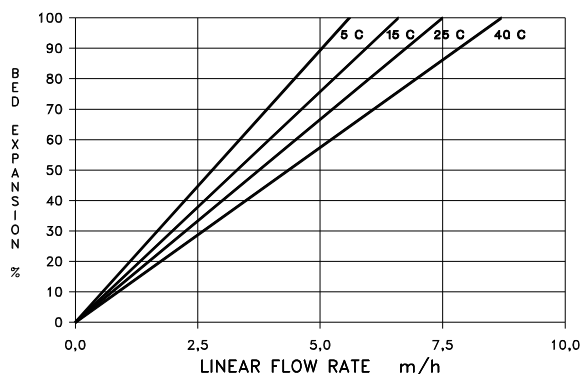
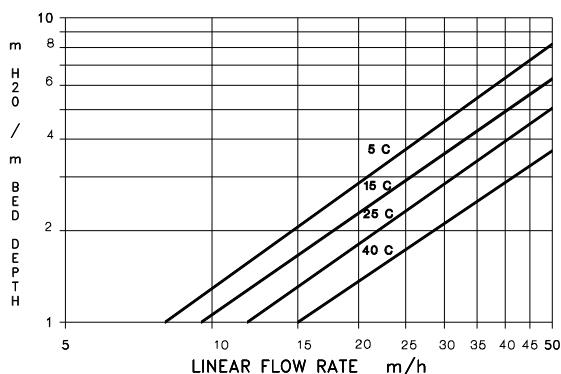


Fig. 2 PRESSURE DROP IN WATER



<b>RECOMMENDED HCl QUALITY FOR REGENERATION (*)</b>	
Suspended solids	0 ppm
Chlorine	10 ppm
Iron	20 ppm
Heavy metals	10 ppm
Sulphates	5000 ppm
(*) Values referred to HCl 100%.	

<b>RECOMMENDED H<sub>2</sub>SO<sub>4</sub> QUALITY FOR REGENERATION (*)</b>		
Purity	95	%
Suspended solids	0	ppm
Iron	50	ppm
Arsenic	5	ppm
Lead	5	ppm
(*) Values referred to H <sub>2</sub> SO <sub>4</sub> 100%.		

<b>RECOMMENDED NaOH QUALITY FOR REGENERATION (*)</b>	
Silica	10 ppm
Iron	10 ppm
Mercury	2 ppm
Heavy metals	5 ppm
Chlorates	10 ppm as O <sub>2</sub>
Sodium carbonate	0.5 %
Sodium chloride	0.5 %
Sodium sulphate	0.2 %
Hardness	0 ppm
Suspended solids	0 ppm
(*) Values referred to NaOH 100%.	