

# food

## RESINDION RESINS FOR FOOD TREATMENTS

TDS11051

DIAION CR11 - Chelating Resin for heavy metals removal

TDS 11051

### DIAION CR11

DIAION CR11 is a chelating resin based on a highly porous copolymer of styrene and divinylbenzene with specific iminodiacetic functional groups conferring very high selectivity in front of heavy metals.

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

The resin is supplied in a calibrated particle size to allow its application in highly concentrated solutions.

DIAION CR11 is also suggested for the removal of heavy metals present in fruit juices.

### TYPICAL CHARACTERISTICS

Matrix	:	Highly porous copolymer styrene-DVB
Functional group	:	Iminodiacetate
Colour and physical form	:	White yellowish opaque beads
Particle size range	:	0.425 ÷ 1.18 m m
Effective size	:	0.4 min m m
Uniformity Coefficient	:	1.5 max
Ionic form at the delivery	:	Na <sup>+</sup>
Volume change	:	- 30 % max Na <sup>+</sup> --> H <sup>+</sup> form
Total exchange capacity	:	1.0 min eq/l
Water retention	:	55 ÷ 65 %
pH stability range	:	0 ÷ 14
Operating pH range	:	1 ÷ 11
Operating temperature	:	120°C max
Shipping density	:	730 (approx.)
Standard packaging	:	25 ÷ 50 liter bags

### RECOMMENDED OPERATING CONDITIONS

Minimum bed depth	:	1500	m m
Linear operating flowrate	:	2 ÷ 25	m/h
Backwash expansion	:	50 ÷ 80	%
Regenerants	:	HCl	NaOH
Regenerant level range	:	130 ÷ 150	70 ÷ 100 g/l
Concentration range	:	5 ÷ 10	2 ÷ 4 %
Slow rinse volume	:	1.5 ÷ 2	1.5 ÷ 2 BV
Fast rinse volume	:	5 ÷ 7	variable (*) BV

(\*) According to the needs of each specific process.

**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

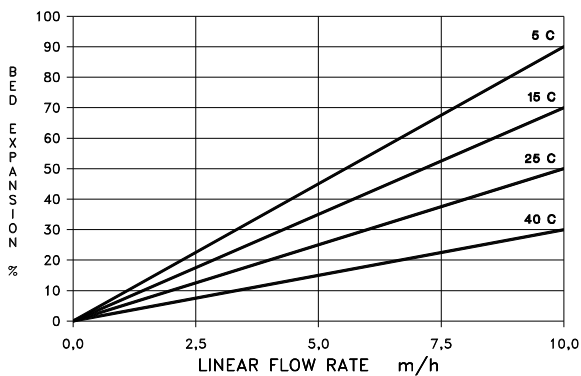
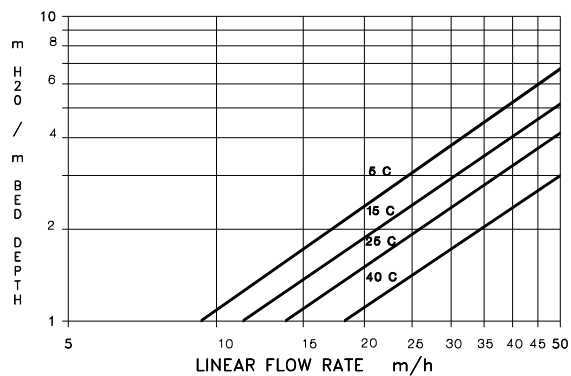


Fig. 2 PRESSURE DROP IN WATER



### RECOMMENDED HCl QUALITY FOR REGENERATION (\*)

Suspended solids	0 ppm
Chlorine	10 ppm
Iron	20 ppm
Heavy metals	10 ppm
Sulphates	5000 ppm

(\*) Values referred to HCl 100%.

### RECOMMENDED NaOH QUALITY FOR REGENERATION (\*)

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 %
Suspended solids	0 %

(\*) Values referred to NaOH 100%.