

DIAION WK10

DIAION WK10 is a porous type weakly acidic cation exchange resin with a structure based on a methacrylic matrix.

This resin shows a very high reaction rate associated to a relatively small volume change in front of monovalent ionic forms; the mechano-osmotic resistance is also very good.

DIAION WK10 is mainly used for special applications such as purification of pharmaceuticals, foods and organic chemicals.

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

TYPICAL CHARACTERISTICS

Matrix	:	Porous copolymer methacrylate-DVB
Functional group	:	Carboxylic
Colour and physical form	:	White opaque beads
Particle size range	:	0.3 ÷ 1.18 m m
Effective size	:	0.40 min m m
Uniformity Coefficient	:	1.6 max
Ionic form at the delivery	:	H ⁺
Volume change	:	+ 50 % max H ⁺ --> Na ⁺ form
Total exchange capacity	:	2.5 min eq/l
Water retention	:	53 ÷ 59 %
pH stability range	:	0 ÷ 14
Operating pH range	:	5 ÷ 14
Operating temperature	:	150 max °C
Shipping weight	:	615 g/l approx.
Standard packaging	:	25 or 1000 liter bags

RECOMMENDED OPERATING CONDITIONS

Minimum bed depth	:	800	m	m			
Linear operating flowrate	:	2 ÷ 60	m/h				
Backwash expansion	:	50 ÷ 80	%				
Regenerants	:	HCl	H ₂ SO ₄	NaOH	NH ₄ OH	Na ₂ CO ₃	
Regenerant level range	:	40 ÷ 120	50 ÷ 150	100 ÷ 130	80 ÷ 120	130 ÷ 170	g/l
Concentration range	:	1 ÷ 5	0.7 ÷ 5	2 ÷ 3	1.5 ÷ 3	5 ÷ 7	%
Slow rinse volume	:	1.5 ÷ 2	BV				
Fast rinse volume	:	3 ÷ 5	BV				

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

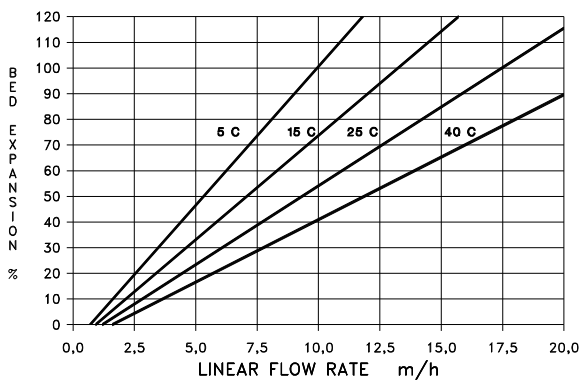
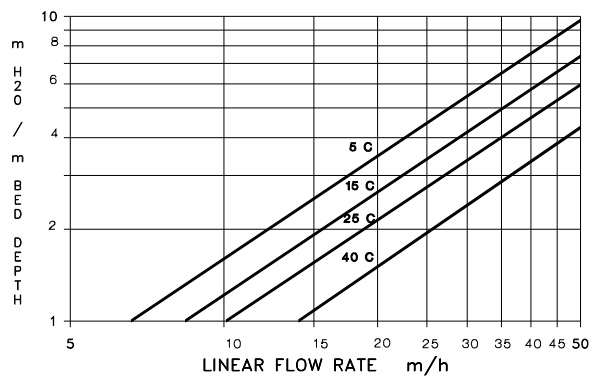


Fig. 2 PRESSURE DROP IN WATER



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 H ₂ SO ₄ QUALITY FOR REGENERATION (*)		
Purity	95	%
Suspended solids	0	ppm
Iron	50	ppm
Arsenic	5	ppm
Lead	5	ppm

(*) Values referred to H₂SO₄ 100%.

RECOMMENDED NaOH QUALITY FOR REGENERATION (*)	
Silica	10 ppm
Iron	10 ppm
Mercury	2 ppm
Heavy metals	5 ppm
Chlorates	10 ppm as O ₂
Sodium carbonate	0.5 %
Sodium chloride	0.5 %
Sodium sulphate	0.2 %
Hardness	0 %
Suspended solids	0 %

(*) Values referred to NaOH 100%.