TDS 050315

RELITE A490

RELITE A490 is a porous strongly basic anion exchange resin having an outstanding selectivity for nitrates.

The porous structure of RELITE A490 allows good exchange kinetics and resistance to physical, thermal, osmotic shocks and organic fouling. Its composition complies with the existing food processing rules and regulations.

The relative affinity towards customary anions follows the scale herebelow, where anions on the left are more firmly linked to the resin:

$$NO_3^- > SO_4^{2-} > Cl^- > HCO_3^-$$

Consequently, during the service cycles nitrates displace sulphates, chlorides and bicarbonates from the resin bed.

RELITE A490 can be used in chloride or bicarbonate form.

TYPICAL CHARACTERISTICS

Matrix	:	Porous copolymer styrene-DVB	
Functional group	:	Quaternary ammonium group	
Colour and physical form	:	Light yellowish opaque beads	
Particle size range	:	0.3 ÷ 1.18	m m
Effective size	:	0.4 min	m m
Uniformity Coefficient	:	1.6	max
Ionic form at the delivery	:	Cl^-	
Total exchange capacity	:	1.3 min	eq/l
Water retention	:	38 ÷ 46	%
Chemical stability	:	Stable in the whole pH range	
Thermal stability	:	100 °C max	(Cl^- form)
Shipping density	:	660	g/l approx.
Standard packaging	:	25 or 1000	liter bags

RECOMMENDED OPERATING CONDITIONS

Operating pH range	:	0 ÷ 12		
Operating temperature range	:	5 ÷ 100	°C	
Minimum bed depth	:	800	m m	
Linear operating flowrate	:	5 ÷ 50	m/h	
Backwash expansion	:	50 ÷ 80	%	
Regenerants	:	NaCl	$NaHCO_3$	
Regenerant level range	:	100 ÷ 200	150 ÷ 300	g/l
Concentration range	:	10	4 ÷ 6	%
Slow rinse volume	:	1.5 ÷ 2	BV	
Fast rinse volume	:	4 ÷ 6	BV	

Resindion S.r.l.
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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

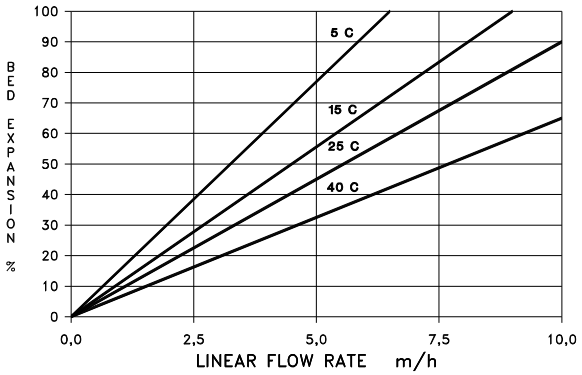
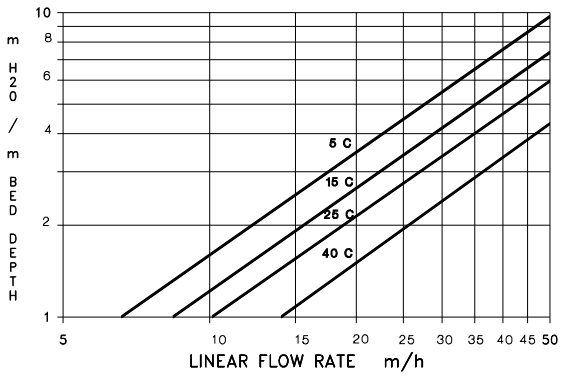


Fig. 2 PRESSURE DROP IN WATER



RECOMMENDED NaCl QUALITY FOR REGENERATION

Purity	97	% min
Moisture	2	% max
Suspended solids	0	%
$Ca^{++} + Mg^{++}$	0.5	% max
Sulphates	1	% max
Soluble iron	0	%
Alkalinity	0.001	max ppm $CaCO_3$