

## Softening Resin

### Strong Acid Cation(Gel)

**DOSHION CSA 121** has a strongly acidic uni-functional cross linked polystyrene structure containing sulphonic acid groups. It is a high capacity gel type resin with excellent physical and chemical properties specially developed for industrial and domestic water softening applications having high hardness of calcium and magnesium salts. Primarily the resin is supplied in Sodium form, however, it can also be used in demineralisation and other special applications in H<sup>+</sup> form.

**DOSHION CSA 121** is highly resistant to attrition and osmotic shocks & offers minimum pressure drop across the resin bed under a wide variety of operating conditions.

Properties	
Matrix	Cross linked Polystyrene Gel
Functional group	SO <sub>3</sub> (Sulphonic )
Ionic Form	Na <sup>+</sup> - Sodium
Physical Form	Hard Moist Beads
Particle size (mm)	0.30- 1.20
Moisture Content %	47 – 53 %
Total Exchange Capacity (eq/L) (min)	1.8 for Na <sup>+</sup> form
Bulk Density / Shipping Weight (gm/L)	750-820
Operating pH Range	0-14
Solubility in common solvents	Insoluble
Volume change % (max) : Na <sup>+</sup> to H <sup>+</sup>	10

Operating Conditions		
Operating Temperature (max)	°C	120
Minimum Bed Depth	cm	75
Regenerant Concentration	%	10-16 (NaCl)
Regenerant Flow Rate	*BV/hr	2 – 4
Regenerant Contact Time	Minutes	30
Regeneration Level 100%	Kg/ m <sup>3</sup> of Resin	60-160 (NaCl)
Displacement Rinse Rate	*BV/hr	2 – 4
Displacement Rinse Volume	#BV	1-2
Fast Rinse Rate	*BV/hr	10-40
Fast Rinse volume	#BV	4 – 10
Service flow rate	*BV/hr	10-40

\* Bed Volume/ Hour ; # Bed Volume

## Full Range of Ion Exchange Resins

Cation Exchange Resin	Anion Exchange Resin	DM Resin
CSA 121	GA 11	DMB 13
CSA 121 - FG	GA 11 UPS	DMB 13 UPS
CSA 9	GA 12	DMB 13 S
CSA 9 UPS	GA 13	
CSA 9 - FG	GA 13 UPS	
CSA 9 L	ASB 108	
CSA 9 L Na - FG	ASB 171	
CSA 29	ASB 8010 D	
CSA 29 UPS	ASB 8010 D UPS	
CSA 609 D	ASB 8020 D	
CWA 63	AWB 7020 D	
CWA 92 D	AWB 7030 D	
CSA 309	AWB 7050 D	
	AWB 7050 D UPS	
	GA 711	
<b>Special Application Ion Exchange Resin</b>		
DCHR 74	CGC 1200	DBR 108
DCHR 78	CMC 1900	FRC 10
DIRM	CMC 2400	ASB 108 H UPS
DCR 11	DAAR 85	GA 13 H UPS
DMB 10	DAAR 312	CWS 66 D
DMB 11	DAAR 313	IPSR 550
DMB 13 S	DAAR 412	

**doshion®**  
*Translating Source Into Resource*

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