

Softening and Demineralization Resin

Strong Acid Cation(Gel)

DOSHION CSA 9 D is a GEL Type Strong Acid Cation Exchange Resin product by the sulfonation of styrene-divinylbenzene copolymers. The resin is designed to combine high operational capacity and superior physical stability. This quality is assured by specifications that call for a whole un-cracked bead content of at least 95% and an unmatched bead strength. **DOSHION CSA 9 D** is the resin of choice whenever high performance is required. The resin is available in both Na⁺ and H⁺ form.

DOSHION CSA 9 D can also be supplied with such particle size and density characteristics that will assure fast and sharp separations when used in combination with DOSHION ASB 108 or DOSHION GA 13 anion resin in mixed bed applications.

Properties	
Matrix	Cross linked Polystyrene
Functional group	SO ₃ (Sulphonic)
Ionic Form	H ⁺ – Hydrogen Na ⁺ – Sodium
Physical Form	Hard Moist Beads
Particle size (mm)	0.30- 1.20
Moisture Content %	48-54 H ⁺ form 43-50 Na ⁺ form
Total Exchange Capacity (eq/L) (min)	1.8 H ⁺ form 2.0 Na ⁺ form
Bulk Density / Shipping Weight (gm/L)	780-820 H ⁺ form 750-820 Na ⁺ form
Operating pH Range	0-14
Solubility in common solvents	Insoluble
Volume change % (max) : Na ⁺ to H ⁺	8-10

Operating Conditions		
Minimum Bed Depth	mm	750
Regenerant Concentration	%	10-16(NaCl) 1-5 (H ₂ SO ₄) ^Φ 4-5 (HCl)
Regenerant Flow Rate	*BV/hr	2 – 8
Regenerant Contact Time	Minutes	30
Regeneration Level	Kg/ m ³ of Resin	60-160 (NaCl) 60-150 (H ₂ SO ₄) 30-150 (HCl)
Displacement Rinse Rate	*BV/hr	2 – 8
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

Φ Sulfuric Acid concentration must be adjusted according to calcium content in the feed water

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	
Special Application Ion Exchange Resin		
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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