

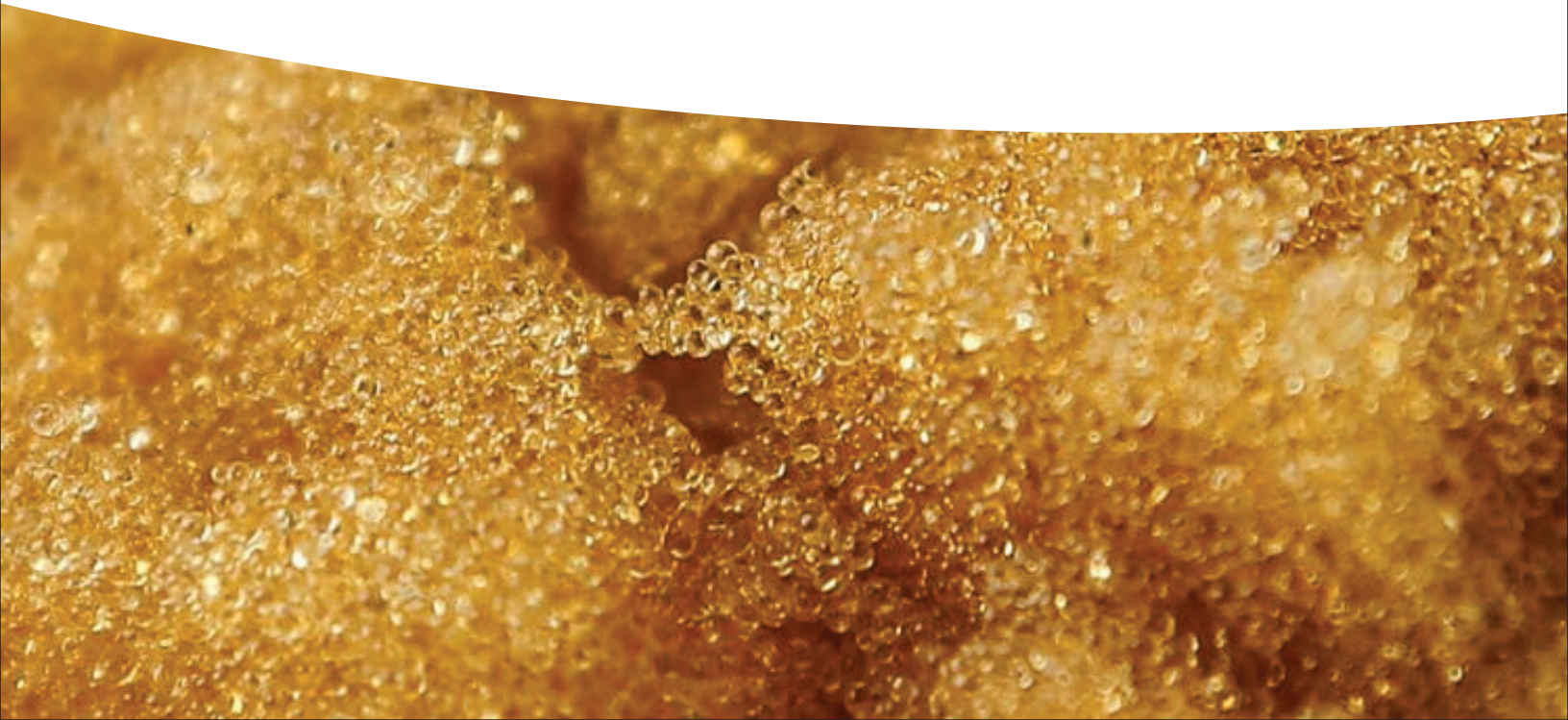
CSA 9 D – Softening and Demineralization Resin

Unmatched Strength and Stability in GEL-Type Cation Exchange Resin

STRONG ACID CATION(GEL)

DOSHION CSA 9 D is a GEL-type strong acid cation exchange resin product derived from the sulfonation of styrene-divinylbenzene copolymers. This resin is designed to combine high operational capacity with superior physical stability. Its quality is assured by specifications that require a whole uncracked bead content of at least 95% and unmatched bead strength. DOSHION CSA 9 D is the resin of choice whenever high performance is required and is available in both Na⁺ and H⁺ forms.

DOSHION CSA 9 D can also be supplied with particle size and density characteristics that ensure fast and sharp separations when used in combination with DOSHION ASB 108 or DOSHION GA 13 anion resins 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) 4-5 (HCl) |
| Regenerant flowrate | *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

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 S | GA 12 | DMB 13 S |
| CSA 9 UPS | GA 13 | |
| CSA 9 S - 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 | |