United States Resin Company

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A-S2 Cl

TYPE II STRONG BASE ANION EXCHANGE RESIN

(Designed for use in high purity water applications)

Product Description

US Resin's A-S2 Cl resin is a high-capacity, conventional gel polystyrene Type II strong base anion exchange resin designed for use in commercial or industrial demineralizer water equipment. The resin is typically converted to the hydroxide form (OH^-) prior to use. The resin offers higher operating exchange capacity and regeneration efficiency. It is also more resistant to organic fouling.

US Resins' A-S2 Cl resin can also be used in dealkalization and nitrate removal applications.

Typical Physical, Chemical & Operating Characteristics

Polymer Structure	Polystyrene cross-linked with Divinylbenzene
Physical Form and Appearance	Tough amber spherical beads
Whole Bead Count	90% Min.
Functional Groups	$R^-N^-(CH_3)_2C_2H_4OH^+X^-$
Ionic Form (as shipped)	Cl^-
Shipping Weight, approx.	705 g/l (44 lb./ft.^{3})
Mesh Size (US Std.)	16-50
Moisture retention, CL^- form	36–46%
Swelling, CL^-—>OH^-	15% max.
Total Exchange Capacity when regenerated in chloride form	1.4 meq/mL
pH Range, Stability	0-14

CHEMICAL AND THERMAL STABILITY

US Resin's A-S2 Cl resin is insoluble in dilute or moderately concentrated acids, alkalies, and in all common solvents. However, exposure to significant amounts of free chlorine, "hypochlorite" ions or other strong oxidizing agents over long periods of time will eventually break down the cross-linking. This will tend to increase the moisture retention of the resin, decreasing its mechanical strength, as well as generating small amounts of extractable breakdown products. Like all conventional Polystyrene Type I anion resins, it is thermally stable to 77^{o}C (170 ^{o}F) in the salt form. The hydroxide form tends to degrade in water temperatures appreciably higher than 35 ^{o}C (95 ^{o}F), thereby losing capacity as the functional groups are gradually replaced by hydroxyl groups.