GENERAL TECHNOLOGIES, SPC

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A353 - Cl

TYPE I MACROPOROUS STRONG BASE ANION EXCHANGE RESIN

(Designed for use in heavy metals reocovery and removal applications)

Product Description

A353(Cl) resin is a macroporous polystyrene Type I strong base anion exchange resin designed for use primarily in decolorizing and organics removal applications.

A353(Cl) resin can be used in dealkalization and demineralization in high-organic waters, and heavy-metal removal applications. Concentration and purification of uranium mine wastewater, concentration and puriification of plutonium, recovery of vanadium in the ammonia industry, removal of zink and in nickel in electroplating solution.

Typical Physical, Chemical & Operating Characteristics

Polymer Structure	Polystyrene cross-linked with Divinylbenzene
Physical Form and Appearance	Tough white spherical beads
Whole Bead Count	90% Min.
Functional Groups	$R\text{-}N^{+}(CH_3)_3X^{-}$
Ionic Form (as shipped)	Cl^{-}
Shipping Weight, approx.	660 - 720 g/l (~43 lb./ft.^{3})
Mesh Size (U.S. Std)	16-50
Moisture retention, Cl^{-} form	50-60%
Total Capacity in Cl^{-} form	>1.1 meq/ml
pH Range, Stability	0–14

CHEMICAL AND THERMAL STABILITY

A353(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 crosslinking. This will tend to increase the moisture retention of the resin, decreasing it s 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.