

# **GENERAL TECHNOLOGIES, SPC**

## **- High-Quality Services & Products**

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### **D830 - H** **CHELATING WEAK ACID CATION EXCHANGE RESIN** (Designed for selective heavy metal removal in wastewater treatment applications)

#### **Product Description**

D830(H) is a weakly acidic cation exchange resin designed to have high chelating selectivity for certain divalent heavy metal cations like mercury, silver, copper, lead, cadmium, nickel, etc. The resin used in mercury removal applications can also be regenerated with hydrochloric acid. This is an advantage over General Technologies' D840(H) chelating resin.

The selectivity sequence for certain metals is as follows:

Hg>Ag>Cu>Pb>Cd>Ni>Co>Fe(2+)>Ca>Na.

High concentrations of sulfates and chlorides normally do not affect its selectivity to heavy metals, but the presence of chelating or complexing agents may affect the operating capacity.

#### **Typical Physical, Chemical & Operating Characteristics**

Polymer Structure	Polystyrene cross linked with Divinylbenzene
Physical Form and Appearance	amber spherical beads
Whole Bead Count	93% Min.
Functional Groups	R-S-H (Thiol)
Ionic Form (as shipped)	H+
Shipping Weight, approx.	720 g/l (45 lb./ft. <sup>3</sup> )
Mesh Size (U.S. Std)	16-40
Moisture retention, H+ form	46-52%
Total Capacity in hydrogen form	>1.2 meq/ml for mercury
pH Range, operating	2-10

#### **CHEMICAL AND THERMAL STABILITY**

D830 resin is insoluble in dilute or moderately concentrated acids, alkalis, and in all common solvents. However, exposure to even small amounts of free chlorine, "hypochlorite" ions, or other strong oxidizing agents may eventually break down the functional groups. This will tend to generate small amounts of extractable breakdown products. The product is thermally stable to higher than 70 °C (160 °F).