

GENERAL TECHNOLOGIES, SPC

- High-Quality Services & Products

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D851 - Na **HIGH-CAPACITY CHELATING WEAK ACID CATION EXCHANGE RESIN** (Designed for selective heavy metal removal in wastewater treatment applications)

Product Description

D851 (Na form) resin is a premium grade, high-capacity macroporous weak acid cation exchange resin with iminodiacetate functional groups. It is designed to chelate/remove many heavy metal cations, even in waters containing high calcium concentrations. It is suitable for use in polishing metal cations from wastewater and process water streams.

The relative affinity of D851 for various divalent cations of the following metals in near neutral solutions are as follows:

H>Cu>V>U02>Pb>Ni>Zn>Co>Cd>Fe>Be>Mn>Mg>Ca>Sr>Ba

High concentrations of sulfates and chlorides or the presence of chelating or complexing agents can alter this sequence and will affect the operating capacity. D851 is made with significantly higher capacity than our standard iminodiacetic resin, D850.

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-CH ₂ -N(CH ₂ COOH) ₂ (Iminodiacetic acid)
Ionic Form (as shipped)	Na ⁺
Shipping Weight, approx.	750 - 800 g/l (49 lb./ft. ³)
Mesh Size (U.S. Std)	16-50
Moisture retention, Na ⁺ form	40-50%
Total Capacity in sodium form	>1.8 meq/ml
pH Range, operating	1-6

CHEMICAL AND THERMAL STABILITY

D851 resin is insoluble in dilute or moderately concentrated acids, alkalis, 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 its mechanical strength, as well as generating small amounts of extractable breakdown products. The product is thermally stable to higher than 100 °C (212 °F) in the sodium form, and 60 °C (140 °F) in the hydrogen form.