



AMBERSEP™ 940 U Resin

Industrial Grade Chelating Exchanger

Description

AMBERSEP™ 940 U Resin is a polydisperse particle size, chelating resin with a porous structure, designed around a crosslinked polystyrene matrix. It exhibits a high capacity and low moisture holding. Due to its matrix, AMBERSEP 940 U has an excellent kinetic and exceptional physical stability, illustrated by its very high bead integrity and its resistance to osmotic shock and mechanical stress.

AMBERSEP 940 U is intended for industrial use and has been specially developed for the extraction of uranium from acidic pregnant solution containing high concentration in chloride.

Typical Physical and Chemical Properties

Physical form	Spherical beads
Matrix	Styrene divinylbenzene copolymer
Functional group	Chelating
Ionic form as shipped	Na ⁺
Total exchange capacity	≥ 1.6 eq/L (Na ⁺ form) (34.9 kgr/ft ³)
Moisture holding capacity	62 to 70% (Na ⁺ form)
Shipping weight	Approx 740 g/L (46 lbs/ft ³)
Particle size	
Uniformity coefficient	≤ 1.6
Harmonic mean size	0.600 – 0.750 mm
> 0.300 mm	3% max
< 1.000 mm	7% max
Maximum reversible swelling	H ⁺ → Na ⁺ : 45%

Test methods available up request

Bed Expansion

Figure 1 shows the bed expansion of AMBERSEP™ 940 U in water at different temperatures.

Hydraulic Characteristics

Figure 2 shows the pressure drop for AMBERSEP™ 940 U, as a function of service flow rate and water temperature. Pressure drop data are valid for packed beds, at the start of service run with clean water.

Chemical Properties

Figure 1. Bed Expansion in Water

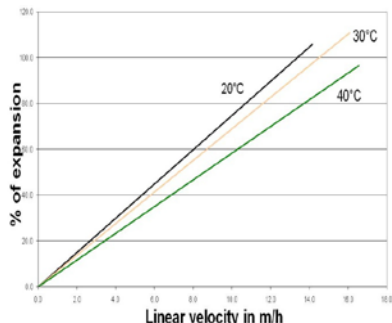


Figure 2. Pressure Drop

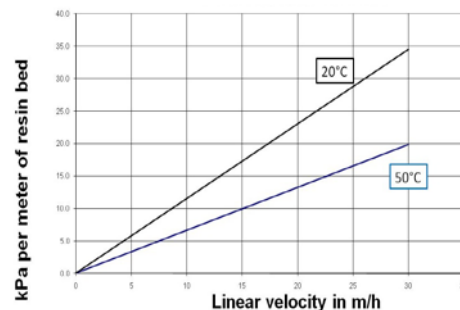
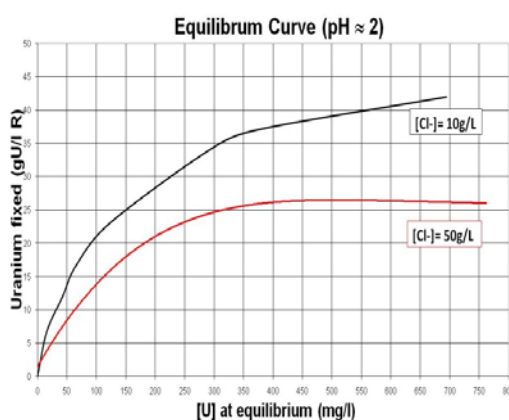


Figure 3. Shows the equilibrium isotherm for AMBERSEP™ 940 U for uranium at different chloride concentrations.



Contact your local Dow representative.

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DOW™ Ion Exchange Resins
For more information about DOW™
resins, call the Dow Water & Process
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Warning: Oxidizing agents such as nitric acid attack organic ion exchange resins under certain conditions. This could lead to anything from slight resin degradation to a violent exothermic reaction (explosion). Before using strong oxidizing agents, consult sources knowledgeable in handling such materials.

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