USWF-8P

US WATER FILTERS

8% cross-linked gel polystyrene strong acid cation exchange resin
(Designed for use in water softening applications)

PRODUCT DESCRIPTION

USWF is a premium grade gel polystyrene strong acid cation exchange resin produced by sulfonated styrene-divinylbenzene (DVB) copolymers. It has excellent chemical, physical, and thermal stability. Its good ion exchange kinetics gives high efficiency for uses in both regenerable softeners and non-regenerable cartridges. Resin capacity depends largely on the amount of salt used during regeneration. Typically 12-15 lbs of salt per ft^3 is used to obtain maximum capacity of up to 32,000 grains per ft^3.

Specifications:

NO.	ITEM	SPECIFICATION
1	Polymer structure:	Gel polystyrene 8% crosslinked with divinylbenzene
2	Appearance:	Amber spherical beads
3	Functional Groups:	Polystyrene sulfonate
4	Ionic form as shipped:	Na^+
5	Total exchange capacity (eq/L)	≥1.95
6	Moisture retention (Na+)	46-50%
7	Particle size range (%)	0.315-1.25mm ≥ 95
8	Whole bead count	≥90%
9	Shipping weight	51 Lbs/ft^3
10	Mesh size (U.S. Std.)	0.4 - 0.6
11	Reversible swelling, $Na^+ \rightarrow H^+$	<5%

Chemical and Thermal Stability

USWF-8P resin is insoluble in dilute or moderately concentrated acids, alkalis, and in all common solvents. However, exposure to >0.1 ppm of free chlorine, “hypochlorite” ions, or other strong oxidizing agents over long periods of time will eventually break down the cross-link. Temperature over 85° F will accelerate the oxidation. 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 sulfonated resins, it is thermally stable to higher than 250° F in the alkali or alkaline earth salt forms.

SUGGESTED OPERATING CONDITIONS

NO.	ITEM	SPEC
1	Max operating temperature	250° F
2	PH range	0-14
3	Service flow rate	5-50 BV/h
4	Regenerant	10-15% NaCl