

AdEdge AD88 IX

Radium Reduction Media
for Water Systems



AdEdge AD88 IX is a premium grade, high capacity, gelular, sulfonated, polystyrene cation resin supplied in the sodium or hydrogen form as moist, tough, uniform, spherical beads. AdEdge AD88 IX media is intended for use in all water softening, dealkalization, deionization and chemical processing applications.

Application: Radium Removal

AdEdge AD88 IX is ideal for use in potable water as well as non-potable and environmental remediation applications for the removal of radium. The high capacity of the AdEdge AD88 IX media can selectively remove the positively charged radium cation to below the state of EPA'ss Maximum Contaminant Limit (MCL) of 5 pCi/L. The AdEdge AD88 systems can deliver the needed performance in two ways: (1) via regeneration type systems which use the media to remove the radium with periodic regeneration using NaCl brine; or (2) as a throw away discardable media which can be discarded when spent. This option maximizes the high capacity of the AD88 media. Where on-site regeneration is not available, this disposal option is the preferred option. Disposal options will vary based on federal, state and local regulations.



AdEdge APU System
featuring AdEdge AD88 IX
media

Features

- **COMPLIES WITH FDA REGULATIONS**

Conforms to paragraph 21CFR173.25 of the Food Additives Regulations of the F.D.A.*

- **COMPLIES WITH FDA REGULATIONS FOR POTABLE WATER APPLICATIONS**

Meets standards for use in systems operating under the Federal meat and poultry products inspection program.

- **AVAILABLE AS NSF/ANSI-61 CERTIFIED**

WQA Gold Seal Certified

- **HIGHLY UNIFORM PARTICLE SIZE, LOW PRESSURE DROP**

16 to plus 50 mesh range; giving a LOWER PRESSURE DROP while maintaining SUPERIOR KINETICS.

- **SUPERIOR PHYSICAL STABILITY**

93% plus sphericity combined with high crush strengths and uniform particle size provide greater resistance to bead breakage. This results in longer resin life and lower pressure drop.

- **LOW COLOR THROW**

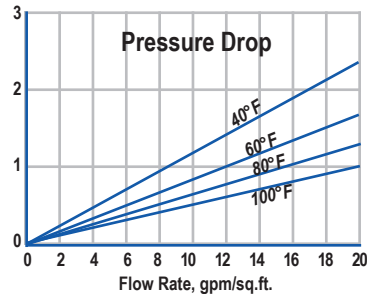
*For potable water applications, the resin must be properly pre-treated, usually by multiple exhaustion and regeneration cycles, to ensure compliance

AdEdge AD88 IX

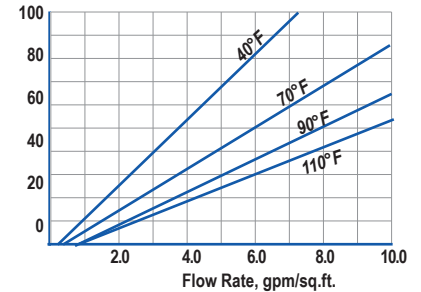
Physical Properties

Polymer Structure	Styrene cross-linked w /DVB
Functional Group	R-(SO3)-M+
Ionic Form, as shipped	Sodium or Hydrogen
Physical Form	Tough, Spherical Beads
Screen Size Distribution	16 to 50
+16 mesh (U.S. Std)	< 5 percent
-50 mesh (U.S. Std)	< 1 percent
pH Range	0 to 14
Sphericity	> 93 Percent
Uniformity Coefficient	Approx. 1.6
Water Retention Cl Form	47 to 54 percent
Solubility	Insoluble
Approximate Shipping Weights	
Hydrogen Form	50 lbs/cu.ft.
Sodium Form	52 lbs/cu.ft.
Swelling... Cl- to OH- Form	5 to 9 percent
Total Capacity	> 1.45 meq / mL
Sodium Form	1.9 meq/ml min
Sodium Form	1.8 meq/ml min

Hydraulic Properties



The graph above shows the expected pressure loss per foot of bed depth as a function of flow rate, at various water temperatures.



After each cycle the resin bed should be backwashed at a rate that expands the bed 50 to 75 percent. This will remove any foreign matter and reclassify the bed. The graph below shows the expansion characteristics of AdEdge AD92 IX, in the chloride form.

Suggested Operating Conditions

Maximum Temperature	85°F
Minimum Bed Depth	28 inches
Service Flow Rate	2 to 4 gpm/cu.ft.
Backwash Rate	50 to 75 percent Bed Expansion
Regenerant Concentration*	6 percent
Regenerant Flow Rate	0.25 to 1.0 gpm/cu.ft.
Regenerant Level	10 to 15 lbs/cu.ft.
Total Waste Water Volume	6-7 Bed Volumes
Total Regeneration Cycle Time	Approx 90 minutes

***CAUTION: DO NOT MIX ION EXCHANGE RESIN WITH STRONG OXIDIZING AGENTS.** Nitric acid and other strong oxidizing agents can cause explosive reactions when mixed with organic materials, such as ion exchange resins. Material Safety Data Sheets (MSDS) are available for all ResinTech Inc. products. To obtain a copy, contact your local ResinTech sales representative or our corporate headquarters. They contain important health and safety information. That information may be needed to protect your employees and customers from any known health and safety hazards associated with our products. We recommend that you secure and study the pertinent MSDS for our products and any other products being used. These suggestions and data are based on information we believe to be reliable. They are offered in good faith. However we do not make any guarantee or warranty. We caution against using these products in an unsafe manner or in violation of any patents; further we assume no liability for the consequences of any such actions.

