AdEdge *AD92 IX*

Uranium Reduction Media for Water Systems

AdEdge AD92 IX is a high capacity, gelular, Type Two strongly basic anion exchange resin for uranium removal supplied in the chloride form as moist, tough,uniform spherical beads. It provides superior regeneration efficiency and greater resistance to organic fouling than Type One strongly basic anion exchange resins. AdEdge AD92 IX is intended specifically for use in removing naturally occuring uranium from groundwater.

Application: *Uranium Removal*

AdEdge AD92 IX is ideal for use in potable water as well as non-potable and environmental remediation applications for removal of naturally occurring uranium. The high efficiency AdEdge AD92 IX can selectively remove negatively charged uranium anion (most often in the form of uranyl carbonate) to below the existing EPA MCL of 30 ug/L. The AdEdge AD92 systems can deliver the needed performance in two ways: (1) via regeneration type systems which use the media to remove the uranium with periodic regeneration using NaCl brine; or (2) as a "throw away" discardable media, which can be discarded when spent. This option maximizes the very high capacity of the AdEdge AD92 IX media. Where on-site regeneration is not available, this option is the preferred option. Disposal options will vary based on federal, state and local regulations.

AdEdge APU System
featuring AdEdge AD92 IX Media

Features & Benefits

- ***HIGH OPERATING CAPACITY***
  The high regeneration efficiency of AdEdge AD92 IX equates to higher throughputs per pound of regenerant chemical.

- ***COMPLIES WITH FDA REGULATIONS FOR POTABLE WATER APPLICATIONS***
  Conforms to paragraph 21 CFR173.25 of the Food Additives Regulations of the F.D.A.*

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

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

- ***ORGANIC FOULING RESISTANCE***
  Type Two exchange functionality provides a dramatic increase in resistance to organic fouling compared to other types of strongly anion exchangers.

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

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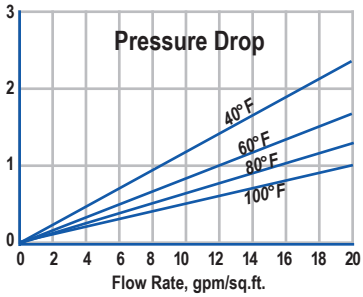
Physical Properties

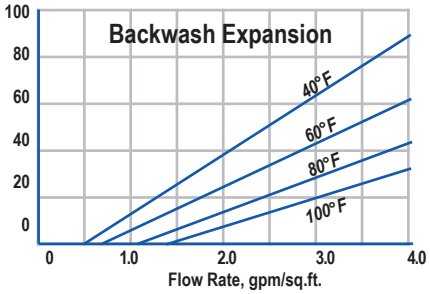
Polymer Structure	Styrene cross-linked
Functional Group	R–N–(CH3)2 C2H5OH+ X–
Ionic Form, as shipped	Chloride
Physical Form	Tough,Spherical Beads
Screen Size Distribution	16 to 50
+16 mesh (U.S. Std)	< 2 percent
-50 mesh (U.S. Std)	< 1 percent
pH Range	6 to 8.2*
Sphericity	> 93 Percent
Uniformity Coefficient	Approx. 1.7
Water Retention Cl Form	37 to 45percent
Solubility	Insoluble
Approximate Shipping Weights	
Chloride Form	44lbs/cu.ft.
Hydroxide Form	41lbs/cu.ft.
Swelling... Cl– to OH– Form	10 to 15 percent
Total Capacity	> 1.45 meq / mL

* for best performance

Hydraulic Properties



The graph above shows the expected pressure loss per foot of beddepth 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.

AdEdge™ water technologies

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