



DOW AMBERSEP™ 920U SO₄ Resin Industrial Grade Strong Base Anion Exchanger

Description

DOW AMBERSEP™ 920U SO₄ Resin is a strongly basic, macro-reticular anion exchange resin. It is a true, macroporous network which differs completely from conventional gel type resins, and provides an outstanding osmotic and physical stability as well as excellent kinetics.

The crosslinked polystyrenic matrix makes this resin particularly stable mechanically.

DOW AMBERSEP 920U SO₄ Resin has been specially developed for the extraction of uranium from ore, both for in-situ leaching and RIP processes.

Typical Physical and Chemical Properties

Resin type	Strongly basic macroreticular anion exchange resin
Matrix	Macroreticular crosslinked polystyrene
Physical form	Opaque beads
Functional groups	-N ⁺ (CH ₃) ₂ CH ₂ CH ₂ OH
Ionic form as shipped	Sulfate, not less than 50%
Total exchange capacity	≥ 1.0 eq/L (Cl ⁻ form)
Moisture holding capacity	53–65% (Cl ⁻ form)
Shipping weight	680-710 g/L
Harmonic mean size	0.845–1.050 mm
Uniformity coefficient	≤ 1.50
Fine contents	< 0.710 mm : 5.0%
Coarse beads	> 1.180 mm : 4.0%
Reversible swelling	Cl → SO ₄ ²⁻ : 5% approximately
Mechanical stability	≥ 98%

Hydraulic Characteristics

DOW AMBERSEP™ 920U SO₄ gives a pressure drop of about 8 kPa per m bed depth (0.35 psi/ft) at a flow rate of 10 m/h (4.1 gpm/ft²) at 15°C (60°F).

A backwash flow rate of 11 m/h (4.5 gpm/ft²) gives a bed expansion of about 70% at 15°C (60°F) in water.

Pressure drop data are valid at the start of the service run with a clear water and a correctly classified bed.

These data are valid for water treatment and have to be corrected according to the solution to be treated.

Limits of Use

Dow manufactures special resins for food processing and potable water applications. As governmental regulations vary from country to country, it is recommended that potential users seek advice from their Dow representative in order to determine the best resin choice and optimum operating conditions.

Product Stewardship

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

DOW™ Ion Exchange Resins For more information about DOW™ resins, call the Dow Water & Process Solutions business:

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Notice: 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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