



AMBERSEP[®] 900 SO₄

Industrial Grade Strong Base Anion Exchanger

PRODUCT DATA SHEET

AMBERSEP 900 SO₄ is a macroreticular polystyrene type 1 strong base anion exchange resin containing quaternary ammonium groups. This allows complete removal of all anions, including weakly dissociated ones like silica. In addition the macroreticular structure imparts superior resistance to mechanical and osmotic shock. AMBERSEP 900 SO₄ has been specially developed for use in three-component mixed bed units.

AMBERSEP 900 SO₄ is the ideal choice in all cases where the highest quality of deionised water is desired. Due to its excellent mechanical strength and good kinetics, it is particularly recommended for applications such as condensate polishing where these resins can be operated at flow rates up to 120 BV/h or 120 m/h.

PROPERTIES

Matrix _____	Styrene divinylbenzene copolymer
Functional groups _____	-N ⁺ (CH ₃) ₃
Physical form _____	Ivory beads
Ionic form as shipped _____	SO ₄ ⁻
Total exchange capacity ^[1] _____	≥ 1.0 eq/L (Cl ⁻ form)
Moisture holding capacity ^[1] _____	57 - 65 % (Cl ⁻ form)
Shipping weight _____	740 g/L
Harmonic mean size _____	500 - 700 μm
Uniformity coefficient _____	≤ 1.45
Fines content _____	< 0.400 mm : 2.0 % max
Coarse beads _____	> 1.180 mm : 1.0 % max
Maximum reversible swelling _____	Cl ⁻ → OH ⁻ : 25 %

^[1] Contractual value

SUGGESTED OPERATING CONDITIONS

Service flow rate _____	10 to 120 BV*/h
Regenerant _____	NaOH 4 %
Flow rate _____	2 to 8 BV/h
Level _____	80 to 150 g/L
Minimum contact time _____	30 minutes
Slow rinse _____	2 BV at regeneration flow rate
Fast rinse _____	4 to 8 BV at service flow rate

* 1 BV (Bed Volume) = 1 m³ solution per m³ resin

HYDRAULIC CHARACTERISTICS

The pressure drop will be about 17 kPa/m bed depth per 10 m/h at 15°C.

A backwash flow rate of 5.5 m/h gives a bed expansion of about 70 % at 15°C.

These data are valid for a resin in the OH form.

LIMITS OF USE

AMBERSEP 900 SO₄ is suitable for industrial uses. For other specific applications such as pharmaceutical, food processing or potable water applications, it is recommended that all potential users seek advice from Rohm and Haas in order to determine the best resin choice and optimum operating conditions.

In Europe, all our products are produced in ISO 9002 certified manufacturing facilities.

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Ion exchange resins and polymeric adsorbents, as produced, contain by-products resulting from the manufacturing process. The user must determine the extent to which organic by-products must be removed for any particular use and establish techniques to assure that the appropriate level of purity is achieved for that use. The user must ensure compliance with all prudent safety standards and regulatory requirements governing the application. Except where specifically otherwise stated, Rohm and Haas Company does not recommend its ion exchange resins or polymeric adsorbents, as supplied, as being suitable or appropriately pure for any particular use. Consult your Rohm and Haas technical representative for further information. Acidic and basic regenerant solutions are corrosive and should be handled in a manner that will prevent eye and skin contact. Nitric acid and other strong oxidising agents can cause explosive type reactions when mixed with Ion Exchange resins. Proper design of process equipment to prevent rapid buildup of pressure is necessary if use of an oxidising agent such as nitric acid is contemplated. Before using strong oxidising agents in contact with Ion Exchange Resins, consult sources knowledgeable in the handling of these materials.

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