

PRODUCT DATA SHEET

**AMBERSEP™ 900 SO<sub>4</sub>**  
**Industrial Grade Strong Base Anion Exchanger**

AMBERSEP 900 SO<sub>4</sub> resin 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

SO<sub>4</sub> resin has been specially developed for use in mixed bed applications. 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 m/h.

**PROPERTIES**

Physical form _____	Ivory spherical beads
Matrix _____	Styrene divinylbenzene copolymer
Functional groups _____	Trimethyl ammonium
Ionic form as shipped _____	SO <sub>4</sub> <sup>-</sup>
Total exchange capacity <sup>[1]</sup> _____	≥ 1.00 eq/L (Cl <sup>-</sup> form)
Moisture holding capacity <sup>[1]</sup> _____	60 - 68 % (Cl <sup>-</sup> form)
Shipping weight _____	690 g/L (approx)
Particle size	
Uniformity coefficient <sup>[1]</sup> _____	≤ 1.45
Harmonic mean size <sup>[1]</sup> _____	0.500 – 0.700 mm
> 1.180 mm <sup>[1]</sup> _____	1.0 % max
< 0.300 mm <sup>[1]</sup> _____	0.5 % max
Maximum reversible swelling _____	Cl <sup>-</sup> → OH <sup>-</sup> : 25 %

<sup>[1]</sup> Contractual value

**SUGGESTED OPERATING CONDITIONS**

Maximum operating temperature _____	60 °C
Service flow rate _____	10 to 120 BV*/h
Regeneration	
Regenerant _____	NaOH 4 %
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

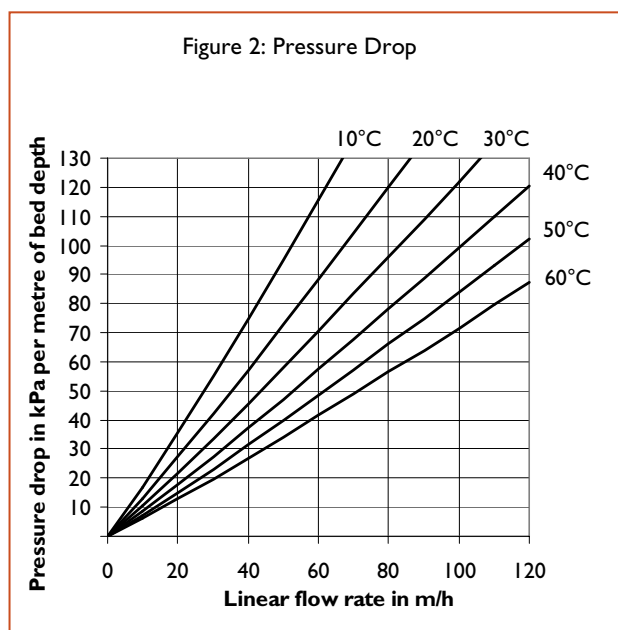
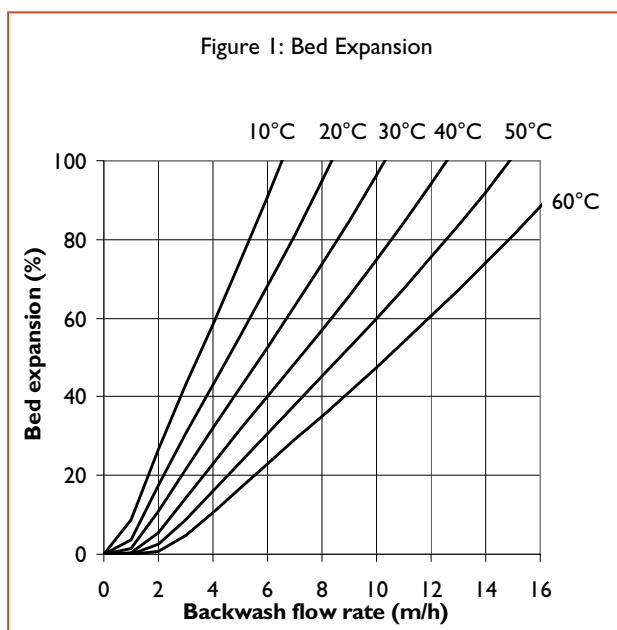
\* 1 BV (Bed Volume) = 1 m<sup>3</sup> solution per m<sup>3</sup> resin

## LIMITS OF USE

AMBERSEP 900 SO<sub>4</sub> resin 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.

## HYDRAULIC CHARACTERISTICS

Figure 1 shows the bed expansion of AMBERSEP 900 OH resin as a function of backwash flow rate and water temperature. Figure 2 shows the pressure drop data for AMBERSEP 900 OH resin as a function of service flow rate and water temperature. Pressure drop data are valid at the start of the service run with 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.



All our products are produced in ISO 9001 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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