

## AMBERSEP™ 252 H Resin

Industrial Grade Strong Acid Cation Exchanger

### Description

AMBERSEP™ 252 H Resin is a macroporous cation exchange resin based on sulphonated crosslinked polystyrene. It has a moderate degree of crosslinking resulting in good regeneration efficiency. It is very resistant to osmotic shock and to mechanical attrition.

AMBERSEP 252 H Resin is designed for use in AMBERSEP units with AMBERSEP 359 inert resin and AMBERSEP 900 OH or AMBERSEP 900 SO<sub>4</sub> strong base anion resins.

### Typical Physical and Chemical Properties

Physical form	Light grey spherical beads
Matrix	Styrene divinylbenzene copolymer
Functional groups	-SO <sub>3</sub> <sup>-</sup>
Ionic form as shipped	H <sup>+</sup>
Total volume capacity, min.	1.65 eq/L (36 kgr/ft <sup>3</sup> )
Moisture retention capacity	52–58%
Shipping density	755 g/L (47 lbs/ft <sup>3</sup> )
Particle size	
Harmonic mean diameter	0.90–1.10 mm
Uniformity coefficient, max.	1.4
< 0.60 mm	1.0% max
> 1.18 mm	10.0% max
Maximum reversible swelling	Na <sup>+</sup> → H <sup>+</sup> : 7%

### Suggested Operating Conditions

Service flow rate	up to 120 BV*/h or 120 m/h	
Regenerants	HCl	H <sub>2</sub> SO <sub>4</sub>
Flow rate	4–5 BV*/h (0.5–0.6 gpm/ft <sup>3</sup> )	4–12 BV*/h (0.5–15 gpm/ft <sup>3</sup> )
Concentration	5–6%	1.5–4%
Level	80–200 g/L (5–12.5 lbs/ft <sup>3</sup> )	125–250 g/L (7.8–15.6 lbs/ft <sup>3</sup> )
Minimum contact time	30 minutes	
Slow rinse	2 BV at regeneration flow rate	
Fast rinse	2–4 BV at service flow rate	

\*1 BV (Bed Volume) = 1 m<sup>3</sup> solution per m<sup>3</sup> resin or 7.5 gals per ft<sup>3</sup> resin

### Hydraulic Characteristics

AMBERSEP 252 H gives a pressure drop of about 6 kPa/m bed depth per 10 m/h at 15°C (0.27 psi/ft bed depth per 4 gpm/ft<sup>2</sup> at 60°F).

A backwash flow rate of 30 m/h (12.2 gpm/ft) gives a bed expansion of about 70% at 15°C/60°F.

### Packaging

25 liter bags

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Warning: 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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