ROHM AND HAAS

AMBERJET™ 1200 Na Industrial Grade Strong Acid Cation Exchanger

Description

AMBERJET 1200 Na resin is a uniform particle size, high quality, strong acid cation exchanger designed for use in all water treatment applications: softening as well as demineralisation. The uniformity and mean particle size of AMBERJET 1200 Na resin have been optimised for use in industrial equipment. In H^+ cycle, it can be used in mixed bed applications paired with AMBERJET 4200 Cl resin. AMBERJET 1200 Na resin can be directly substituted for conventional gel cation exchange resin in new equipment and in rebeds of existing installations.

Typical Properties

These properties are typical but do not constitute specifications.

Physical form	Amber spherical beads
Matrix	Styrene divinylbenzene copolymer
Functional group	Sulfonate
Ionic form as shipped	Na^+
Total exchange capacity [1]	≥ 2.00 eq/L (Na^+ form)
Moisture holding capacity [1]	43 to 47% (Na^+ form)
Shipping weight	850 g/L
Specific gravity	1.26 to 1.30 (Na^+ form)
Particle size	
Uniformity coefficient [1]	≤ 1.2
Harmonic mean size	620 ± 50 µm
Fines content [1]	< 0.300 mm : 0.1% max
Maximum reversible swelling	$Na^+ \rightarrow H^+$: 10%

[1] *Contractual value*
Test methods are available on request

Suggested Operating Conditions

Maximum operating temperature	135°C		
Minimum bed depth	800 mm		
Service flow rate	5 to 50 BV*/h		
Maximum service velocity	60 m/h		
Regeneration			
Regenerant	NaCl	HCl	H_2SO_4
Level (g/L)	50 to 240	40 to 150	40 to 200
Concentration (%)	10	4 to 10	1 to 8
Minimum contact time	20 minutes		
Slow rinse	2 BV at regeneration flow rate		
Fast rinse	1 to 3 BV at service flow rate		

** 1 BV (Bed Volume) = 1 m^3 solution per m^3 resin*

Performance

Operating capacity and ionic leakage depend on several factors such as water analysis, temperature and regenerant level. The engineering data sheets EDS 0355 A, 0356 A, 0359 A, 0360 A, 0366 A and 0367 A provide information to calculate them.

Limits of Use

AMBERJET 1200 Na resin is suitable for industrial uses. For all 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 AMBERJET 1200 Na resin as a function of backwash flow rate and water temperature. Figure 2 shows the pressure drop data for AMBERJET 1200 Na resin as a function of service flow rate and water temperature. Pressure drop data are valid at the start of the service run with a clear water and a correctly classified bed.

Fig. 1 : Bed Expansion

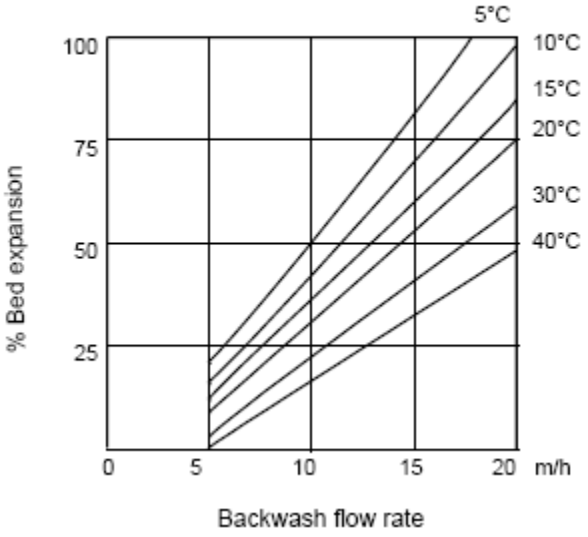
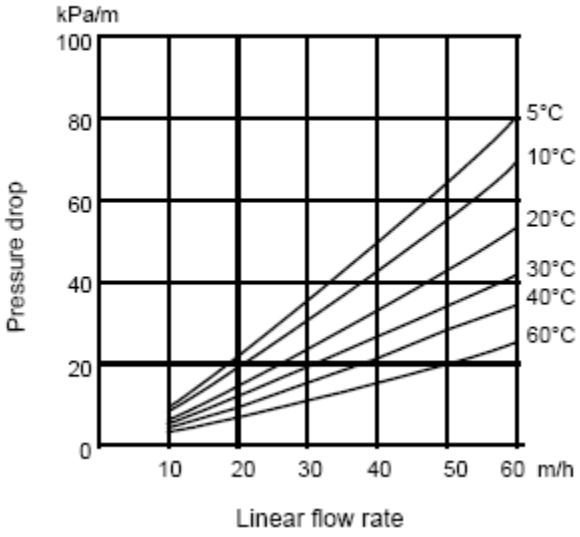


Fig. 2 : Pressure Drop



All our products are produced in ISO 9001 certified manufacturing facilities.

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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