

PRODUCT DATA SHEET

AMBERJET™ I 000 Na **Industrial Grade Strong Acid Cation Exchanger**

AMBERJET 1000 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 1000 Na have been

optimised for use in industrial equipment. AMBERJET 1000 Na can be directly substituted for conventional gel cation exchange resin in new equipment and in re-beds of existing installations.

PROPERTIES

Physical form _____	Amber spherical beads
Matrix _____	Styrene divinylbenzene copolymer
Functional group _____	Sulfonic acid
Ionic form as shipped _____	Na ⁺
Total exchange capacity ^[1] _____	≥ 2.00 eq/L (Na ⁺ form)
Moisture holding capacity ^[1] _____	45 to 50 % (Na ⁺ form)
Shipping weight _____	850 g/L
Specific gravity _____	1.26 to 1.30 (Na ⁺ form)
Particle size	
Uniformity coefficient ^[1] _____	≤ 1.3
Harmonic mean size _____	0.600 - 0.800 mm
< 0.425 mm ^[1] _____	2 % max
Maximum reversible swelling _____	Na ⁺ → 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 40 BV*/h
Regeneration	
Regenerant _____	NaCl HCl H ₂ SO 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 m³ solution per m³ resin

PERFORMANCE

Operating capacity and ionic leakage depend on several factors such as water analysis, temperature and regenerant level. The engineering data sheets EDS 0760 A, 0761 A, 0762 A, 0763 A, 0764 A and 0765 A provide information to calculate them in softening and demineralisation applications with co-flow and reverse flow regeneration.

LIMITS OF USE

AMBERJET 1000 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 1000 Na resin as a function of backwash flow rate and water temperature. Figure 2 shows the pressure drop data for AMBERJET 1000 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 clear water and a correctly classified bed.

Fig. 1 : Bed Expansion

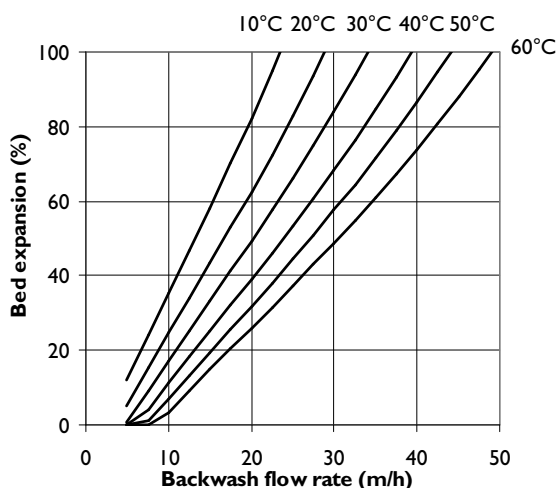
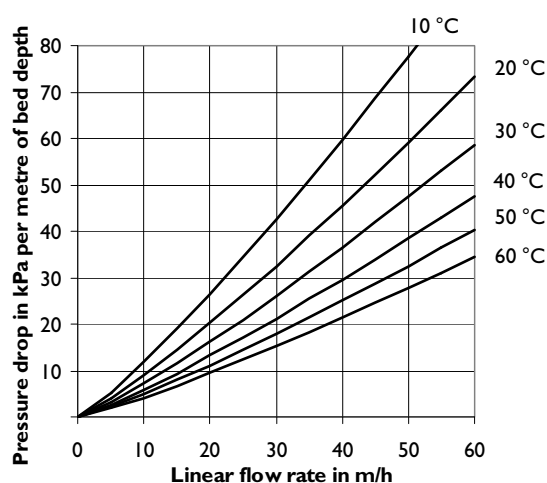


Fig. 2 : Pressure Drop



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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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