

PRODUCT DATA SHEET

AMBERJET™ 4200 Cl **Industrial Grade Strong Base Anion Exchanger**

AMBERJET 4200 Cl resin is a uniform particle size, high quality, strong base type 1 anion exchanger designed for use in all general demineralisation systems. The uniformity and mean particle size of AMBERJET 4200 Cl resin have been optimised for use in industrial equipment including mixed beds,

when paired with AMBERJET 1200 H resin or AMBERJET 1200 Na resin. AMBERJET 4200 Cl resin can be directly substituted for conventional gel anion exchange resin in new equipment and in rebeds of existing demineralisers.

PROPERTIES

Physical form _____	Yellow translucent spherical beads
Matrix _____	Styrene divinylbenzene copolymer
Functional group _____	Trimethyl ammonium
Ionic form as shipped _____	Cl ⁻
Total exchange capacity ^[1] _____	≥ 1.30 eq/L (Cl ⁻ form)
Moisture holding capacity ^[1] _____	49 to 55 % (Cl ⁻ form)
Shipping weight _____	670 g/L
Particle size	
Uniformity coefficient ^[1] _____	≤ 1.25
Harmonic mean size _____	0.60 to 0.80 mm
< 0.425 mm ^[1] _____	0.5 % max
Maximum reversible swelling _____	Cl ⁻ → OH ⁻ : about 30 %

^[1] Contractual value

Test methods are available on request.

SUGGESTED OPERATING CONDITIONS

Maximum operating temperature _____	60 °C
Minimum bed depth _____	800 mm
Service flow rate _____	5 to 50 BV*/h
Maximum service velocity _____	60 m/h
Regeneration	
Regenerant _____	NaOH
Level _____	40 to 100 g/L
Concentration _____	2 to 5 %
Minimum contact time _____	20 minutes
Slow rinse _____	2 BV at regeneration flow rate
Fast rinse _____	3 to 6 BV at service flow rate

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

PERFORMANCE

Due to its high basicity AMBERJET 4200 Cl resin has a very good affinity for weak acids so that extremely low silica leakage values in the ppb range are obtained with reverse flow regeneration. Operating capacity and silica leakage depend on several factors such as water analysis, temperature and regenerant level. The engineering data sheets EDS 0357 A and 0358 A provide information to make the necessary calculations.

LIMITS OF USE

AMBERJET 4200 Cl 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 4200 Cl resin as a function of backwash flow rate and water temperature. Figure 2 shows the pressure drop data for AMBERJET 4200 Cl 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

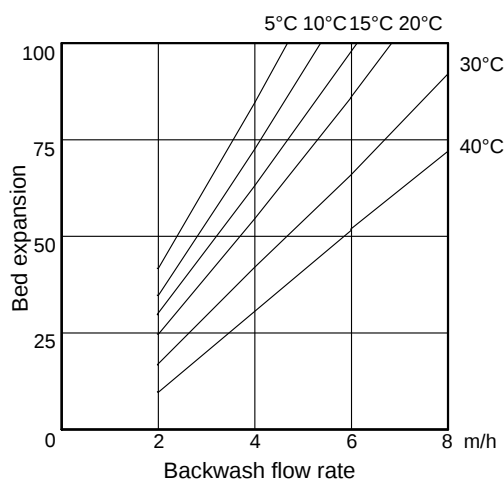
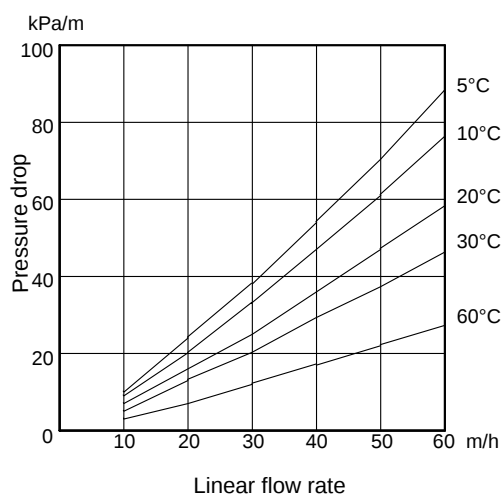


Fig. 2 : Pressure Drop



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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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