



AMBERJET® 4600 CI

Industrial Grade Strong Base Anion Exchanger

PRODUCT DATA SHEET

AMBERJET 4600 CI is a uniform particle size, high quality, strong base type 2 anion exchanger designed for use in all general demineralisation systems. The uniformity and mean particle size of AMBERJET 4600 CI have been optimised for use in industrial equipment including co-flow,

reverse flow regenerated units and packed bed systems.

It can be directly substituted for conventional gel anion exchange resin in new equipment and in rebeds of existing demineralisers.

PROPERTIES

Matrix _____	Styrene divinylbenzene copolymer
Functional groups _____	$-N^+(CH_3)_2CH_2CH_2OH$
Physical form _____	Insoluble, yellow transparent beads
Ionic form as shipped _____	Cl^-
Total exchange capacity ^[1] _____	≥ 1.25 eq/L (Cl^- form)
Moisture holding capacity ^[1] _____	45 to 51 % (Cl^- form)
Specific gravity _____	1.085 to 1.115 (Cl^- form)
Shipping weight _____	680 g/L
Harmonic mean size _____	600 to 800 μm
Uniformity coefficient ^[1] _____	≤ 1.25
Fines content ^[1] _____	< 0.425 mm : 0.5 % max
Coarse beads _____	> 0.850 mm : 10,0 % max
Maximum reversible swelling _____	$Cl^- \rightarrow OH^-$: 20 %

^[1] Contractual value

Test methods available upon request

SUGGESTED OPERATING CONDITIONS

Minimum bed depth _____	800 mm
Service flow rate _____	5 to 50 BV/h
Maximum service velocity _____	60 m/h
Regenerants _____	NaOH
Level _____	30 to 100 g/L
Concentration _____	2 to 5 %
Flow rate _____	2 to 8 BV*/h
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

AMBERJET 4600 Cl has a better regeneration efficiency than type 1 resins, resulting in a higher capacity. However its affinity for silica is lower. Operating capacity and silica leakage depend on several factors such as water analysis, temperature and regenerant level. The engineering data sheets EDS 0410 A and 0411 A provide information to calculate them.

LIMITS OF USE

AMBERJET 4600 Cl 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.

Caution : as all type 2 anion exchangers, AMBERJET 4600 Cl tends to lose its strongly basic groups when the fluid to be treated or the regenerant solution has a temperature exceeding 35°C.

HYDRAULIC CHARACTERISTICS

Figure 1 shows the bed expansion of AMBERJET 4600 Cl as a function of backwash flow rate and water temperature. Figure 2 shows the pressure drop data for AMBERJET 4600 Cl, 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

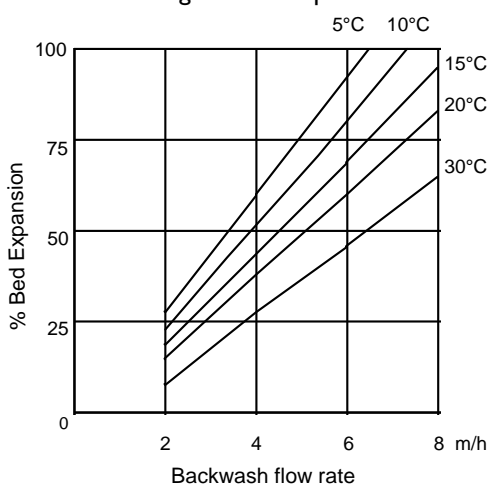
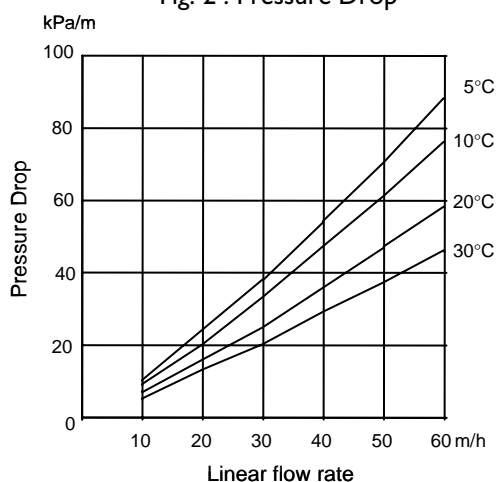


Fig. 2 : Pressure Drop



All our products are produced in ISO 9002 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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