

PRODUCT DATA SHEET

AMBERJET™ 4600 Cl

Industrial Grade Strong Base Anion Exchanger

AMBERJET 4600 Cl resin 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 Cl resin 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

Physical form _____	Yellow translucent spherical beads
Matrix _____	Styrene divinylbenzene copolymer
Functional group _____	Dimethyl ethanol ammonium
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
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 ⁻ : 20 %

^[1] Contractual value

Test methods available upon request

SUGGESTED OPERATING CONDITIONS

Maximum operating temperature _____	35 °C
Minimum bed depth _____	800 mm
Service flow rate _____	5 to 50 BV*/h
Maximum service velocity _____	60 m/h
Regeneration	
Regenerant _____	NaOH
Level _____	30 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

AMBERJET 4600 Cl resin has 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 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.

Caution: as all type 2 anion exchangers, AMBERJET 4600 Cl resin 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 resin as a function of backwash flow rate and water temperature. Figure 2 shows the pressure drop data for AMBERJET 4600 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.

