

PRODUCT DATA SHEET

AMBERLYST™ A21

Industrial Grade Weakly Basic Polymeric Resin

AMBERLYST A21 is a bead form, weak base anion exchange resin developed for the removal of acidic materials from product streams. AMBERLYST A21 is supplied in the water-moist free base form. After proper solvent conditioning, it can be used directly to remove acidic materials from organic solvents and to remove phenol from benzene and inhibitors from

monomers : hydroquinone (HQ), hydroquinone mono-ethyl ether (MEHQ), tertiary butyl catechol (TBC).

AMBERLYST A21 is also used in adsorption of SO₂ from gas streams.

PROPERTIES

Physical form _____	Opaque spherical beads
Ionic form as shipped _____	Free Base (FB)
Concentration of active sites _____	≥ 1.30 eq/L ^[1]
	≥ 4.6 eq/kg
Moisture holding capacity ^[1] _____	56 to 62 % (FB form)
Shipping weight _____	660 g/L (41.2 lbs/ft ³)
Particle size	
Harmonic mean size _____	0.490 - 0.690 mm
Uniformity coefficient _____	≤ 1.80
Fines content ^[1] _____	< 0.300 mm : 1.0 % max
Coarse beads _____	> 1.180 mm : 2.0 % max
Nitrogen BET	
Surface area _____	35 m ² /g
Average pore diameter _____	110 Å
Total pore volume _____	0.10 cc/g
Swelling _____	Water to phenol : 77 %

^[1] Contractual value

SUGGESTED OPERATING CONDITIONS (Chemical Processing)

pH range _____	0 to 14		
Maximum operating temperature _____	100°C (210°F)		
Minimum bed depth _____	600 mm (24 inches)		
Service flow rate _____	8 to 40 BV/h (1 to 5 gpm/ft ³)		
Regenerants _____	NaOH	NH₄OH	Na₂CO₃
Flow rate (BV/h) _____	4 to 8	4 to 8	4 to 8
Flow rate (gpm/ft ³) _____	0.5 to 1.0	0.5 to 1.0	0.5 to 1.0
Concentration (%) _____	2 to 4	2 to 4	4 to 8
Level _____	120 % of ionic load		
Minimum contact time _____	30 minutes		
Slow rinse _____	2 BV (15 gal/ft ³) at regeneration flow rate		
Fast rinse _____	2 to 4 BV (15 to 30 gal/ft ³) at service flow rate		

HYDRAULIC CHARACTERISTICS

Figure 1 shows the bed expansion of AMBERLYST A21 as a function of backwash flow rate and water temperature.

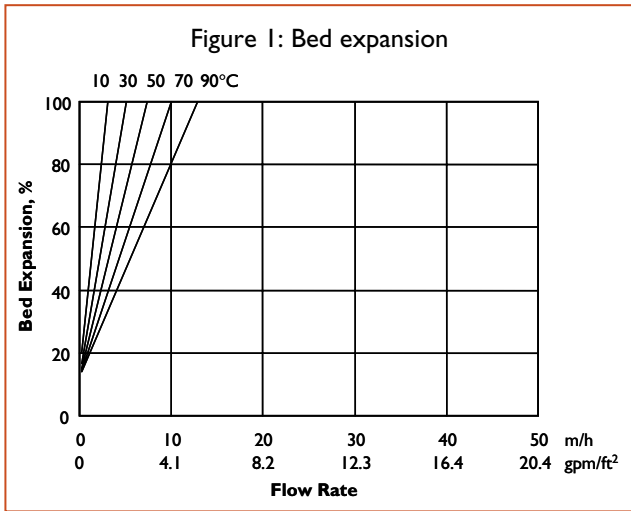
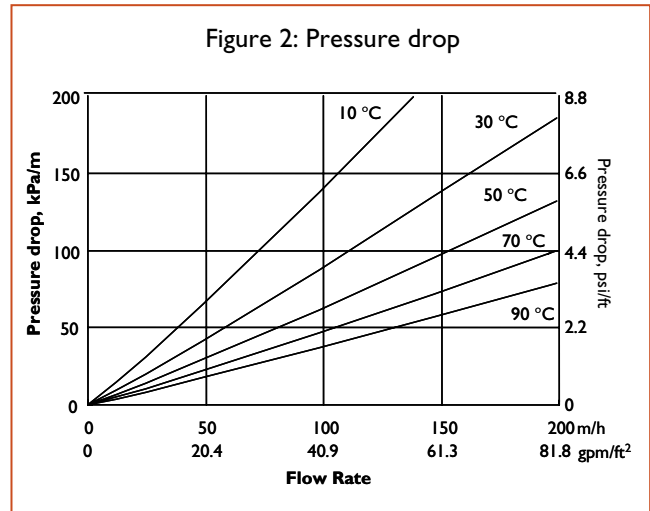


Figure 2 shows the pressure drop data for AMBERLYST A21 as a function of service flow rate and water temperature.



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

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