



AMBERLYST™ 16WET

Industrial Grade Strongly Acidic Catalyst

Introduction

AMBERLYST 16WET is a bead form, macroreticular, sulfonic acid, ion exchange resin, developed particularly for heterogeneous catalysis. The macroreticular structure and large pore diameter of AMBERLYST 16WET ensures that it has excellent activity in polar organic systems. The sulfonic acid groups of AMBERLYST 16WET are more resistant to thermal degradation than other ion exchange catalysts, allowing it to be used economically at higher temperatures. AMBERLYST 16WET is mainly used in the esterification and phenol alkylation processes.

Properties

Physical form	Opaque beads
Ionic form as shipped	Hydrogen
Concentration of active sites	≥ 1.7 eq/L ≤ 4.8 eq/kg
Moisture holding capacity	52 to 58 % (H ⁺ form)
Shipping weight	780 g/L (48.7 lbs/ft ³)
Harmonic mean size	0.600 to 0.800 mm
Uniformity coefficient	≤ 1.6
Fine contents	< 0.300 mm: 1.0% max
Coarse beads	> 1.180 mm: 10.0% max
Nitrogen BET	
Surface area	30 m ² /g
Average pore diameter	250 Å
Total pore volume	0.20 ml/g
Shrinkage	Water to phenol: 32% Water to dry: 52%

Suggested Operating Conditions

Maximum operating temperature	130°C (265°F)
Minimum bed depth	600 mm (24 inches)
Operating flow rate	1 to 5 BV*/h (LHSV)
Pressure drop limitation	1 bar (15 psig) across the bed

Hydraulic Characteristics

Figure 1 shows the bed expansion of AMBERLYST 16WET as a function of backwash flow rate and water temperature.

Figure 2 shows the pressure drop data for AMBERLYST 16WET as a function of service flow rate and water temperature.

Figure 1 : Bed Expansion

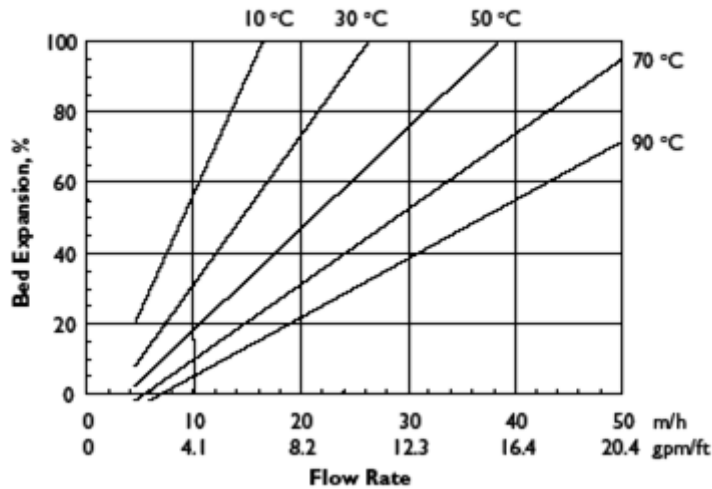
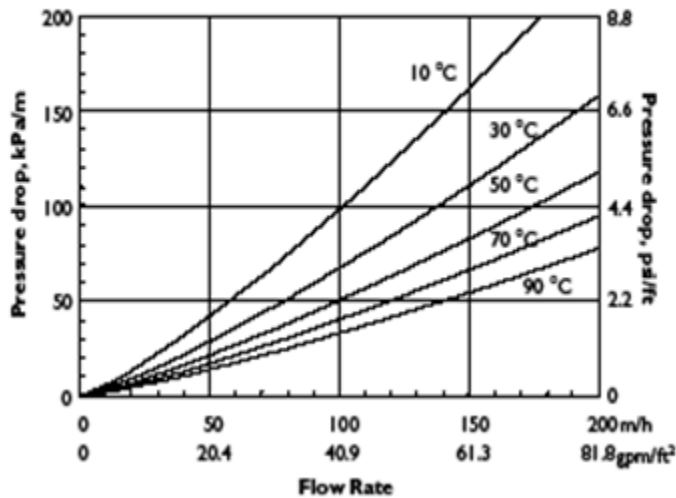


Figure 2 : Pressure Drop



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