

**AMBERLYST[®] 46**

Industrial Grade Strongly Acidic Catalyst

Introduction

AMBERLYST 46 is a macroreticular, sulphonic acid polymeric catalyst designed primarily for use as a solid acid catalyst in the esterification and transesterification processes.

Due to its functionalized surface AMBERLYST 46 greatly reduces the formation of dialkyl ether by-products from the acid-catalyzed self-condensation of alcohol. Compared to conventional strongly acidic resin catalysts, AMBERLYST 46 provides excellent selectivity for the esters over the ethers in high temperature and high conversion esterification reaction.

Properties

Physical form	Beige/brown, opaque spherical beads
Functional group	SO ₃ H
Concentration of acid sites	0.8 to 1.3 eq/kg
Water content	26 to 36 %
Shipping weight	600 g/L (37.4 lbs/ft ³)
Particle Size	
Fine contents	< 0.425 mm : 1.0 % max
Surface area	75 m ² /g
Average pore diameter	235 Å

Test methods are available upon request.

Suggested Operating Conditions

Maximum operating temperature	120 °C (250 °F)
Minimum bed depth	60 cm (24 inches)
Operating flow rate	1 to 8 BV*/h (LHSV)
Pressure drop limitation	1 bar (15 psig) across the bed

* 1 BV = 1m³ solution per m³ of resin

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