



## Product Data Sheet

### AMBERLYST™ 36DRY Polymeric Catalyst

Industrial-grade, Strongly Acidic Catalyst

#### Description

AMBERLYST™ 36DRY Polymeric Catalyst is a bead-form, macroporous, sulfonic acid resin developed particularly for heterogeneous catalysis.

The special process used to manufacture AMBERLYST™ 36DRY results in a particularly high concentration of acid groups and also confers an improved thermal stability when compared to catalysts with a similar level of crosslinking. It is also less prone to the polymer fouling.

AMBERLYST™ 36DRY is mainly used in the phenol alkylation processes.

#### Applications

- Phenol alkylation

#### Typical Properties

<b>Physical Properties</b>	
Copolymer	Styrene-divinylbenzene
Matrix	Macroporous
Type	Strong acid cation
Functional Group	Sulfonic acid
Physical Form	Black, opaque, spherical beads
<b>Nitrogen BET</b>	
Surface Area	33 m <sup>2</sup> /g
Total Pore Volume	0.20 cc/g
Average Pore Diameter	240 Å
<b>Chemical Properties</b>	
Ionic Form as Shipped	H <sup>+</sup>
Concentration of Acid Sites †	≥ 5.40 eq/kg
Catalyst Volatiles	≤ 1.65%
<b>Particle Size §</b>	
Particle Diameter	550 – 700 µm
< 300 µm	≤ 2.0%
> 1180 µm	≤ 3.0%
<b>Swelling (in solvent)</b>	
Phenol	20%
<b>Density</b>	
Shipping Weight	770 g/L

† Dry Weight Capacity ≥ 5.40 eq/kg

§ For additional particle size information, please refer to the [Particle Size Distribution Cross Reference Chart](#) (Form No. 177-01775).

#### Suggested Operating Conditions

Maximum Operating Temperature	150°C (300°F)
Bed Depth, min.	600 mm (2.0 ft)
Pressure Drop, max.	1 bar (15 psig) across the bed
Flowrates	
Linear Hourly Space Velocity (LHSV)	0.5 – 5 h <sup>-1</sup>

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Please be aware of the following:

- **WARNING:** Oxidizing agents such as nitric acid attack organic ion exchange resins under certain conditions. This could lead to anything from slight resin degradation to a violent exothermic reaction (explosion). Before using strong oxidizing agents, consult sources knowledgeable in handling such materials.

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