



Product Data Sheet

AMBERLYST™ 33 Polymeric Catalyst

Industrial-grade Strongly Acidic Catalyst

Description

AMBERLYST™ 33 Polymeric Catalyst is a clean, gel-type, sulfonic acid polymeric catalyst, exhibiting high activity for the production of high-purity Bisphenol-A (BPA) via the condensation of phenol with acetone. This catalyst was specifically designed with very low acid leaching to meet the more stringent demands of BPA.

Typical Physical and Chemical Properties**

Physical Form	Amber spherical beads
Ionic Form as Shipped	H ⁺ Form
Concentration of Acid Sites ^d	≥ 5.10 eq/kg ≥ 1.30 eq/L
Water Retention Capacity	64 – 68%
Particle Size	
Particle Diameter ^b	630 ± 25 µm
Uniformity Coefficient	≤ 1.40
< 300 µm	≤ 0.05%
< 425 µm	≤ 2.5%
> 1180 µm	≤ 0.1%
Shrinkage	Water → Phenol : 47%
Bulk Density, as Shipped ^c	732 g/L

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

^c As per the backwashed and settled density of the resin, determined by ASTM D-2187.

^d Total Exchange Capacity (on a water-wet basis) ≥ 1.30 eq/L; Dry Weight Capacity ≥ 5.10 eq/kg.

Suggested Operating Conditions**

Maximum Operating Temperature	130°C (265°F) in non-aqueous media 80°C (175°F) in aqueous media
Bed Depth, min.	1000 mm (29 inches)
Operating Flowrate	1 – 5 BV*/h (LHSV)
Pressure Drop, max.	1 bar (15 psig) across the bed

* 1 BV (Bed Volume) = 1 m³ solution per m³ resin or 7.5 gal per ft³ resin

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For more information, contact our Customer Information Group:

Asia Pacific	+86 21 3851 4988
Europe, Middle East, Africa	+31 115 672626
Latin America	+55 11 5184 8722
North America	1-800-447-4369

www.dowwaterandprocess.com

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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