Product Data Sheet

DuPont™ AmberLyst™ 33 Polymeric Catalyst

Industrial-grade, Strongly Acidic Catalyst

Description

DuPont™ AmberLyst™ 33 Polymeric Catalyst is a clean, gel, 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.

Applications

- Condensation (Bisphenol-A)

Typical Properties

Physical Properties	
Copolymer	Styrene-divinylbenzene
Matrix	Gel
Type	Strong acid cation
Functional Group	Sulfonic acid
Physical Form	Amber, translucent, spherical beads
Chemical Properties	
Ionic Form as Shipped	H^+
Concentration of Acid Sites ‡	≥ 5.00 eq/kg ≥ 1.20 eq/L
Water Retention Capacity	64 – 70%
Particle Size §	
Particle Diameter	550 – 750 µm
Uniformity Coefficient	≤ 1.60
< 300 µm	≤ 1.0%
> 1180 µm	≤ 2.0%
Shrinkage (in solvent)	
Phenol	46%
Density	
Shipping Weight	750 g/L

‡ Dry Weight Capacity ≥ 5.00 eq/kg; Total Exchange Capacity (on a water-wet basis) ≥ 1.20 eq/L

§ For additional particle size information, please refer to the Particle Size Distribution Cross Reference Chart (Form No. 45-D00954-en).

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 (3.3 ft)
Pressure Drop, max.	1 bar (15 psig) across the bed
Flowrates	
Linear Hourly Space Velocity (LHSV)	0.5 – 5 h^{-1}

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Product Stewardship

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Customer Notice

DuPont strongly encourages its customers to review both their manufacturing processes and their applications of DuPont products from the standpoint of human health and environmental quality to ensure that DuPont products are not used in ways for which they are not intended or tested. DuPont personnel are available to answer your questions and to provide reasonable technical support. DuPont product literature, including safety data sheets, should be consulted prior to use of DuPont products. Current safety data sheets are available from DuPont.

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.

Have a question? Contact us at:

www.dupont.com/water/contact-us

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