



Product Data Sheet

DuPont™ AmberLyst™ 17 Polymeric Catalyst

Industrial-grade, Strongly Acidic Catalyst

Description

DuPont™ AmberLyst™ 17 Polymeric Catalyst is a high-activity, premium-grade catalyst. The high activity is imparted by DuPont's unique uniform particle size technology, coupled with a high degree of sulfonic acid functionality.

AmberLyst™ 17 is particularly suited for fixed bed operations running with rapid throughput. The particle size has been optimized to its usage in batch reactors as it provides fast kinetics, e.g., for phenol alkylation reactions.

Applications

- Fixed bed operations running with rapid throughput
- Batch reactors or CSTRs
- Phenol alkylation

Typical Properties

Physical Properties

| | |
|------------------|--|
| Copolymer | Styrene-divinylbenzene |
| Matrix | Macroporous |
| Type | Strong acid cation |
| Functional Group | Sulfonic acid |
| Physical Form | White to yellow, opaque, spherical beads |

Nitrogen BET

| | |
|-----------------------|----------------------|
| Surface Area | 30 m ² /g |
| Total Pore Volume | 0.35 cc/g |
| Average Pore Diameter | 200 Å |

Chemical Properties

| | |
|-------------------------------|-----------------------------|
| Ionic Form as Shipped | H ⁺ |
| Concentration of Acid Sites ‡ | ≥ 4.90 eq/kg ≥ 1.85 eq/L |
| Water Retention Capacity | 50 – 54% |

Particle Size §

| | |
|-------------------|-------------|
| Particle Diameter | 475 ± 50 µm |
| < 297 µm | ≤ 1.0% |
| 400 – 650 µm | ≥ 95.0% |

Density

| | |
|-----------------|---------|
| Shipping Weight | 760 g/L |
|-----------------|---------|

‡ Dry Weight Capacity ≥ 4.90 eq/kg; Total Exchange Capacity (on a water-wet basis) ≥ 1.85 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 | 120°C (248°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 ⁻¹ |

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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.

Have a question? Contact us at:

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