



Product Data Sheet

AMBERLYST™ A26 OH Polymeric Catalyst

Industrial-grade, Strongly Basic Polymeric Resin

Description

AMBERLYST™ A26 OH Polymeric Catalyst is a Type I strong base anion, macroporous, polymeric catalyst based on crosslinked styrene-divinylbenzene copolymer containing quaternary ammonium groups. Its porous structure makes it a good choice for use in aqueous and non-aqueous media. The macroporous structure and pore size distribution imparts excellent resistance to mechanical and osmotic shock.

AMBERLYST™ A26 OH is used to catalyze reactions such as aldol condensation and carbonylation where a strongly basic catalyst is required. Its pore structure allows large molecules to enter and react on the basic groups.

AMBERLYST™ 26 OH is also used to remove anionic transition metal complexes and mercaptans from hydrocarbons, acids from hydrocarbons and other non-polar solvents, oleic acid from chlorinated hydrocarbons, and acids from phenol-acetone solutions. The macroporous matrix provides large pores presenting a sponge-like structure. This feature, combined with its strong basicity, permits the removal of large, soluble, organic molecules.

AMBERLYST™ A26 OH is virtually inert in strong acids, concentrated alkalis, aliphatic and aromatic hydrocarbons, alcohols, ethers, and other common solvents.

Applications

- Aldol condensation
- Carbonylation
- Ethynylation

Typical Properties

Physical Properties

Copolymer	Styrene-divinylbenzene
Matrix	Macroporous
Type	Strong base anion, Type I
Functional Group	Quaternary ammonium
Physical Form	Tan, opaque, spherical beads

Nitrogen BET

Surface Area	30 m ² /g
Total Pore Volume	0.20 cc/g
Average Pore Diameter	290 Å

Chemical Properties

Ionic Form as Shipped	OH ⁻
Concentration of Base Sites †	≥ 4.20 eq/kg ≥ 0.80 eq/L
Water Retention Capacity	66 – 75%

Particle Size §

Particle Diameter	560 – 700 µm
Uniformity Coefficient	≤ 1.45
< 300 µm	≤ 0.5%
> 1180 µm	≤ 5.0%

Shrinkage (in solvent)

Acetone	34%
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Density

Shipping Weight	675 g/L
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† Dry Weight Capacity ≥ 4.20 eq/kg; Total Exchange Capacity (on a water-wet basis) ≥ 0.80 eq/L

§ 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	60°C (140°F)
Bed Depth, min.	1000 mm (3.3 ft)
Pressure Drop, max.	1 bar (15 psig) across the bed
Flowrates	
Operating	1 – 5 BV*/h (0.125 – 0.625 gpm/ft ³)
Linear Hourly Space Velocity (LHSV)	0.5 – 5 h ⁻¹
Backwash	See Figure 1
Regeneration	1 – 4 BV/h (0.125 – 0.5 gpm/ft ³)
Total Rinse Requirement	4 – 10 BV (30 – 75 gal/ft ³)
Regenerant	NaOH
Concentration	1 N

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

Hydraulic Characteristics

Estimated bed expansion of AMBERLYST™ A26 OH Polymeric Catalyst as a function of backwash flowrate and temperature is shown in Figure 1.

Estimated pressure drop for AMBERLYST™ A26 OH as a function of service flowrate and temperature is shown in Figure 2. These pressure drop expectations are valid at the start of the service run with clean water and a well-classified bed.

Figure 1: Backwash Expansion

Temperature = 10 – 90°C (50 – 194°F)

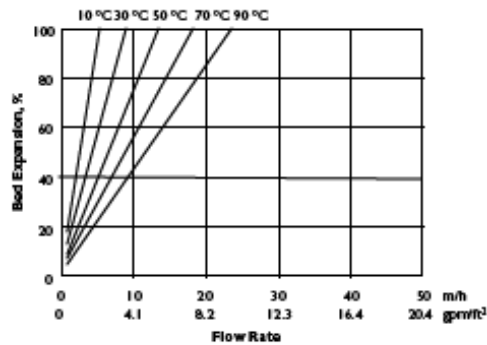
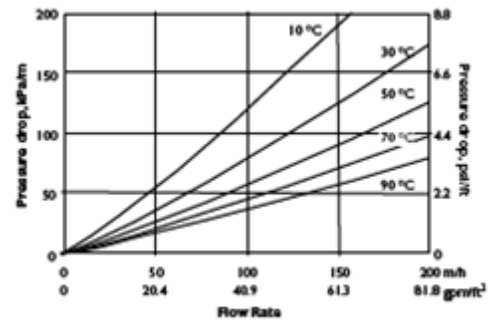


Figure 2: Pressure Drop

Temperature = 10 – 90°C (50 – 194°F)



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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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