



AMBERLYST™ A21 Dry

Industrial Grade Weakly Basic Polymeric Resin

Description

AMBERLYST™ A21 Dry resin is an industrial grade weakly basic polymeric resin supplied in bead form. This weak base anion exchange resin was developed for the purification or disproportionation of chlorosilanes. AMBERLYST A21 Dry can also be used for the removal of acidic materials from hydrocarbon streams where minimal water can be tolerated.

Typical Physical and Chemical Properties

Physical form	Opaque spherical beads
Ionic form as shipped	Free Base (FB)
Concentration of base sites	>/= 5.0 eq/kg ⁽¹⁾
Water content	< 0.3 % ⁽¹⁾
Bulk density	330 g/L
Harmonic mean size	0.55 mm
Fines content	< 0.300 mm: 1.0% max
Coarse beads	> 1.18 mm: 2.0% max
Nitrogen BET	
• Surface area	35 m ² /g
• Average pore diameter	110 Angstrom
• Total pore volume	0.10 cc/g
Swelling	
• Dry to SiCl ₄	7%
• Dry to SiCl ₃ H	26%

Suggested Operating Conditions

pH range	0-14
Maximum operating temperature	100°C
Minimum bed depth	600 mm

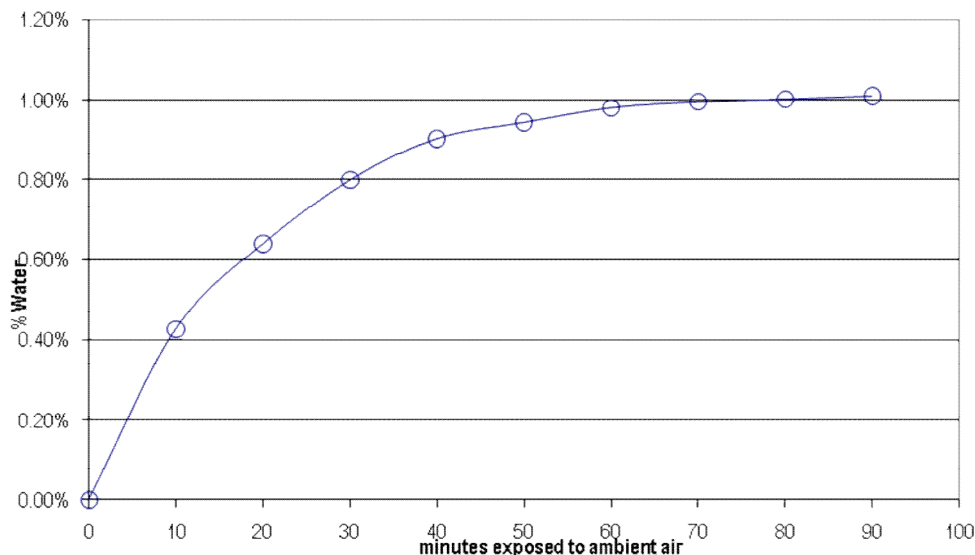
Water Uptake

AMBERLYST™ A21 Dry resin does exhibit a tendency to pick up moisture from the air. The amount of moisture pickup by the resin is likely dependent upon the ambient humidity. Figure 1 below provides an example of moisture pickup where it shows that after one hour approximately 1% moisture had been added to AMBERLYST A21 Dry at ambient temperatures.

Loading and Handling Procedure

Due to the fact that AMBERLYST™ A21 Dry resin picks up moisture upon exposure to air, it is recommended that the exposure of AMBERLYST A21 Dry to air containing any moisture be avoided. Therefore, it is recommended that the container of AMBERLYST A21 Dry be opened under conditions where the atmosphere is moisture-free and added to the reactor under a blanket of dry nitrogen.

Figure 1: AMBERLYST™ A21 Dry Moisture Uptake



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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.

DOW™ Ion Exchange Resins

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