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Description

Standard 3A Molecular Sieve is used for dehydration applications that require all feasible water content to be removed from a desired product stream. Some saturated mixtures, known as constant boiling point mixtures, cannot be dehydrated through distillation alone due to naturally occurring azeotropes. When an azeotrope is reached, molecular sieves can be applied to complete the dehydration process and achieve a drier product stream. Type 3A molecular sieve can dehydrate various saturated solutions, even when an azeotrope does not occur, and is widely applied as a bulk dehydrator for increasing the quality and purity of product streams.

Specifications

Molecular Sieve					
Standard 3A Molecular Sieve		Bead			
Property	Unit	4x8 Mesh	8x12 Mesh	1/8 Inch	1/16 Inch
Diameter	mm	2.5 - 5.0	1.6 - 2.5	3.0 - 3.5	1.5 - 2.0
Attrition	wt%	≤ 0.1	≤ 0.1	≤ 0.5	≤ 0.5
Bulk Density	lb/ft ³	43 - 48	44 - 49	41 - 46	42 - 47
Crush Strength	lbf	≥ 18	≥ 6.5	≥ 15.5	≥ 7.5
Moisture Content	wt%	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0
Static Water Adsorption	wt%	≥ 21.0	≥ 21.0	≥ 20.5	≥ 20.5

Industries Used

natural gas dehydration petroleum gas dehydration refrigerant drying
 biofuel production oil refining insulated glass
 dehydration of unsaturated hydrocarbons streams (cracked gas, acetylene, ethylene, propylene, butadiene)
 adsorption of NH₃ and H₂O from N₂/H₂ streams
 polar liquid drying (ethanol and methanol)
 plastic, paint, sealant, glue

Storage

Molecular sieve is an adsorbent and should not be left exposed to open air to prevent water from being adsorbed before its intended use. This product should be stored in dry conditions with air-proof packaging. Type 3A molecular sieve should not be regenerated at temperatures exceeding 450°F.