



MOLECULAR SIEVE

Molecular sieve desiccants are highly porous materials known for selectively adsorbing specific molecules, commonly used for moisture and gas drying applications due to their exceptional capacity and selectivity. The main types include 3A, 4A, 5A, and 13X, with particle sizes ranging from 1.5mm to 2.5mm. The 13X variant, with a 1 nm pore size, can adsorb molecules smaller than 1 nm. Moreover, molecular sieve desiccants are environmentally friendly and can be regenerated and reused through processes like heating, restoring their adsorption capacity.



WHAT ARE THE CHARACTERISTICS OF MOLECULAR SIEVE DESICCANT?

- 
HIGH SELECTIVITY
 Molecular sieve desiccants exhibit selective adsorption based on molecular size and polarity, enabling them to target specific molecules while excluding others.
- 
REGENERABILITY
 Saturated molecular sieve desiccants can be regenerated through heating, allowing reuse after moisture or gas removal.
- 
NON-TOXIC
 Generally safe for use, making them suitable for applications involving food, pharmaceuticals, and sensitive environments.
- 
CHEMICAL AND THERMAL STABILITY
 Molecular sieve desiccants remain stable under various conditions, including high temperatures and chemically active environments.
- 
PARTICLE SIZE CONTROL
 Can be tailored to specific particle sizes suitable for different applications, optimizing adsorption performance.
- 
LONG SHELF LIFE
 When stored properly, they retain their effectiveness over time, providing consistent performance.

WHAT IS THE METHOD FOR PRODUCING RAW MATERIALS FOR MOLECULAR SIEVE DESICCANT?

Producing raw materials for molecular sieve desiccants involves extracting silica and alumina from sources like sand and bauxite, which are then processed into precursor compounds. These compounds undergo hydrothermal treatment to form zeolite structures, followed by washing, drying, and potential modifications for tailored adsorption properties. Specialized equipment and controlled conditions are essential in the production process, with stringent quality control to ensure consistent performance. Variations in desiccant types are achieved through adjustments in composition and parameters.



WHAT CAN MOLECULAR SIEVE DESICCANT BE USED FOR?



- GAS DRYING AND PURIFICATION
 Used to remove water vapor and impurities from gases in industries such as natural gas processing, petrochemicals, and air separation.



- ELECTRONICS
 Placed in electronics packaging to prevent moisture damage to sensitive electronic components during storage and transportation.



- PHARMACEUTICALS
 Utilized to control humidity in pharmaceutical manufacturing, packaging, and storage to maintain product stability.



- FOOD PACKAGING
 Placed in food packaging to extend shelf life by controlling moisture levels and preventing spoilage.



WISORBENT TECHNOLOGY LLC

11 E Stow Rd, Marlton, NJ 08053, USA
 info@wisorbent.com



• For additional desiccant solutions visit wisorbent.com •

WISORBENT TECHNOLOGY LLC

11 E Stow Rd, Marlton, NJ 08053, USA
 info@wisorbent.com

Call today
 to place an order
 +1 (800) 272-5238