

# MOLECULAR SIEVES

## DESCRIPTION

Molecular sieves have a wide variety of uses in gas and chemical purification processes. We offer Types 3A, 4A, 5A, and 13X beads in a variety of mesh sizes in the standard container sizes shown below. Custom packaging is also available.

### Beads offer some distinct advantages over pellets that are offered by competitors.

- Beads provide a greater surface area per cubic foot resulting in more efficient adsorption for equivalent sized beds.
- Beads are stronger than pellets, thus they maintain their size and shape for more efficient adsorption.
- Beads do not create dust to the degree that pellets do; this results in a cleaner system with less frequent clogging of system filters.
- Beads offer an equivalent pressure drop to pellets.

### Molecular Sieve 3A Formula $K_{12}[(AlO_2)_{12}] \cdot X H_2O$

The potassium form of the Type A Crystal structure, is an alkali metal aluminosilicate. Type 3A is used for drying polar liquids such as ethanol and methanol and the dehydration of unsaturated hydrocarbons such as acetylene, butadiene, and propylene.

### Molecular Sieve 4A Formula $Na_{12}[(AlO_2)_{12}] \cdot X H_2O$

The sodium form of the Type A Crystal structure, is an alkali metal aluminosilicate. Type 4A is used for drying inert gases and saturated hydrocarbons, such as methane, ethane, and propane.

### Molecular Sieve 5A Formula $Ca_4,5Na_3[(AlO_2)_{12}] \cdot X H_2O$

The calcium form of the Type A Crystal structure, is an alkali metal aluminosilicate. Type 5A is used for separating normal paraffins from branched-chain and cyclic hydrocarbons through a selective adsorption process.

### Molecular Sieve 13X Formula $Na_{86}[(AlO_2)_{86}(SiO_2)_{106}] \cdot X H_2O$

The sodium form of the Type X Crystal structure, is an alkali metal aluminosilicate. Type 13X is used for general drying of inert gases and saturated hydrocarbons, purification of air through removal of water and carbon dioxide, and the removal of H<sub>2</sub>S and mercaptans from natural gas.

## HOW TO ORDER

Quantity		Type			
		3A	4A	5A	13X
<b>1/16" beads</b>	<b>8 x 12 mesh</b>				
1 x 1 lb.		MS1-3A001	MS1-4A001	MS1-5A001	MS1-13X001
6 x 1 lb		MS1-3A6X1	MS1-4A6X1	MS1-5A6X1	MS1-13X6X1
1 x 5 lbs.		MS1-3A005	MS1-4A005	MS1-5A005	MS1-13X005
4 x 5 lbs.		MS1-3A4X5	MS1-4A4X5	MS1-5A4X5	MS1-13X4X5
1 x 25 lbs.		—	—	—	MS1-13X025
1 x 30 lbs.	MS1-3A030	MS1-4A030	MS1-5A030		
1 x 55 lbs.		—	—	—	MS1-13X055
1 x 60 lbs.	MS1-3A060	MS1-4A060	MS1-5A060		
<b>1/8" beads</b>	<b>4 x 8 mesh</b>				
1 x 1 lb.		MS2-3A001	MS2-4A001	MS2-5A001	MS2-13X001
6 x 1 lb		MS2-3A6X1	MS2-4A6X1	MS2-5A6X1	MS2-13X6X1
1 x 5 lbs.		MS2-3A005	MS2-4A005	MS2-5A005	MS2-13X005
4 x 5 lbs.		MS2-3A4X5	MS2-4A4X5	MS2-5A4X5	MS2-13X4X5
1 x 25 lbs.		—	—	—	MS2-13X025
1 x 30 lbs.	MS2-3A030	MS2-4A030	MS2-5A030		
1 x 55 lbs.		—	—	—	MS2-13X055
1 x 60 lbs.	MS2-3A060	MS2-4A060	MS2-5A060		