

[Molecular Sieve](#)

Molecular Sieve

A molecular sieve is a material with tiny, uniform pores that is used to adsorb gases and liquids. Unlike common filters, the molecular sieve operates on a molecular level. It only could adsorb molecules which are small enough to pass through the pores, such as water molecules. Because of this, the molecular sieve is usually used as a desiccant, which can adsorb water up to 22% of its own weight.

Molecular sieves often consist of aluminosilicate minerals, clays, zeolites, active carbons, synthetic compounds, etc. that have pores which small molecules can pass through. Usually, a 4 to 8 mesh sieve is ideal for gas phase applications, and a 8 to 12 mesh sieve is perfect for liquid phase applications. The powder forms of the 3A, 4A, 5A and 13X sieves are used in specialized applications.

Established in 1970, we are Chempack are an experienced molecular sieve manufacturer in China. To ensure our customers could find the product they are looking for, we offer four types of molecular sieves, which are listed below

1. Molecular Sieve MS-3A

As its pore size is 3A, this molecular sieve does not adsorb any molecule larger than 3A. It is suitable for adsorbing cracked gasses, ethylene and propylene in the fields of the deep drying, refinery polymerization. Also, it can be used in adsorbing any other non-acidic gasses of liquids in petroleum and chemical industries.

2. Molecular Sieve MS-4A

It can be as an adsorbent for water, methanol, ethanol, sulfured hydrogen, carbon dioxide, ethylene and propylene. As this molecular sieve adsorbs molecules which are not larger than 4A, it is often used as a desiccant.

3. Molecular Sieve MS-5A

Chempack 5A small oxygen enrichment molecular sieve is specially designed for medical or healthy oxygen generator-a mini PSA plant for medical application. Because of high purity of oxygen concentrating and long life span, it is increasingly used in the medical care field.

4. Molecular Sieve MS-13X

13X molecular sieve is a sodium form of type X crystal and contains pores of large size. It adsorbs molecules with a kinetic diameter of less than 9 Angstrom (0.9nm), while not adsorbing larger molecules that are widely used as desiccant for medical and air compressor systems. In addition, this molecular sieve can be adjusted to accommodate other applications.

Common Molecules and Critical Diameter

Molecule	Critical Dia (Å)	Molecule	Critical Dia (Å)
Helium	2.0	Propylene	5.0
Hydrogen	2.4	Ethyl mercaptan	5.1
Acetylene	2.4	1-Butene	5.1
Oxygen	2.8	<i>trans</i> -2-Butene	5.1
Carbon monoxide	2.8	1,3-Butadiene	5.2
Carbon dioxide	2.8	Chlorodi fluoromethane	5.3
Nitrogen	3.0	Thiophene	5.3
Water	3.2	Isobutane to isodocosane	5.6
Ammonia	3.6	Cyclohexane	6.1
Hydrogen sulfide	3.6	Benzene	6.7
Argon	3.8	Toluene	6.7
Methane	4.0	<i>p</i> -Xylene	6.7
Ethylene	4.2	Carbon tetrachloride	6.9
Ethylene oxide	4.2	Chloroform	6.9
Ethane	4.4	Neopentane	6.9
Methanol	4.4	<i>m</i> -Xylene	7.1
Methyl mercaptan	4.5	<i>o</i> -Xylene	7.4
Propane	4.9	Triethylamine	8.4
n-Butane to n-docosane	4.9		

At Chempack, we offer a wide variety of products, including hydrotreating catalyst, ammonia catalyst, shift catalyst, sulfur recovery catalyst, and more. As an ISO9001 certified company, we are committed to producing high quality products. To achieve this, we employ highly skilled staff, utilize high precision equipment, only work with qualified suppliers, and strictly oversee each stage of production. As a result of our efforts, our catalyst products are high quality and very popular with customers worldwide.

Whenever you have a need for our products, please feel free to contact us. We look forward to hearing from you.

FEED BACK FORM

E-mail:

Message:

Product Name:

Your Name:

Company:

FAX / TEL:

MSN/SKYPE

Address: