

Product: Molecular Sieve 4A



Molecular Sieve type 4A (Angstrom) is an alkali alumina silicate, obtained through synthesis of type A zeolite in sodic form. It is the sodium form of the Type A crystal structure. 4A molecular sieve has an effective pore opening of about 4 angstroms (0.4nm). Galaxychem type 4A molecular sieve will absorb most molecules with a kinetic diameter of less than 4 angstroms and exclude those larger

Application

Will absorb in sequence of absorption rate, argon, krypton, xenon, ammonia, carbon monoxide, C₂H₄, C₂H₂, CH₃OH, C₂H₅OH, CH₃en₂, CS₂, CH₃CL, CH₃Br, and carbon dioxide.

1. Deep drying of air, natural gas, alkane and refrigerant.
2. Generation and purification of argon.
3. Static dehydration of electronic element, pharmaceutical and unstable materials.
4. Desiccant of paint, PU Plastic, dope and fuel etc.
5. Drying and removing of CO₂ from natural gas, LPG, air, inert and atmospheric gases, etc.
6. Removal of hydrocarbons, ammonia and methanol from gas streams (ammonia syn gas treating)
7. Special types are used in the air break units of buses, trucks and locomotives.
8. Packed in small bags, it may be used simply as a packaging desiccant

Technical Specification

| Item | Unit | Target | | | |
|-------------------------|----------|-----------|-----|---------|---------|
| | | Pellet | | Sphere | |
| Shape | | | | | |
| Diameter | mm | 1.6 | 3.2 | 1.7-2.5 | 3.0-5.0 |
| Size ratio up to grade | % min | 98 | 98 | 96 | 96 |
| Bulk density | g/ml min | 0.67~0.75 | | | |
| Wear ratio | % max | 0.2 | 0.2 | 0.2 | 0.2 |
| Crushing strength | N min | 35 | 70 | 35 | 85 |
| Static water absorption | % min | 22 | 22 | 22 | 22 |

| Item | Unit | Target | | | |
|---------------------------|--------------------------------------|--------|-----|--------|-----|
| | | Pellet | | Sphere | |
| strength | compression garrulous strength N/mm2 | 25 | 25 | 40 | 80 |
| | Coefficient of variation | 0.3 | 0.3 | 0.3 | 0.3 |
| Static Methane absorption | % min | 16 | 16 | 16 | 16 |
| Packing water | % max | 1.0 | 1.0 | 1.0 | 1.0 |

Regeneration

1. Removing the moisture:

You May use the dry gas like nitrogen, the air, the hydrogen, the saturated hydrocarbon and heat the gas up to 150-320 °C. Firstly you need let the hot gas purge through the molecular sieve bed with the pressure of 0.3-05kg/m² for 3 to 4 hours. Then change to dry cold gas for 2-3 hour, at last you need isolate the molecular sieve from air and cool it to room temperature.

2. Removing the organics:

You can use the water vapor to take the place of organics, then use the method 1.

You can also use the hot water vapor or inner gas pass through the molecular sieve under the temperature of 200-350°C (couldn't use the gas which will explore when to mix with the adsorbed organics).

3. Removing the gas

You can reduce the pressure to regenerate the molecular sieve.