

Molecular Sieve 3A

Performance features and uses:

Molecular Sieve 3A is an alkali metal alumina-silicate; it is the potassium form of the type A crystal structure. Type 3A has an effective pore opening of about 3 angstroms (0.3nm). This is large enough to allow in moisture, but excludes molecules such as unsaturated hydrocarbons which can potentially form polymers; and this maximizes lifetime when dehydrating such molecules.

Chemical Formula: $0.4K_2O \cdot 0.6Na_2O \cdot Al_2O_3 \cdot 2.0SiO_2 \cdot 4.5H_2O$

Technical data

| Item | Unit | Technical data | | | |
|--------------------------|------|---------------------|---------------------|-----------|------------|
| Shape | | Pellet | | Sphere | |
| Diameter | / | 1.5-1.7mm | 3.0-3.3mm | 1.6-2.5mm | 3.0-5.0mm |
| Size ratio up to grade | % | ≥98 | ≥98 | ≥98 | ≥98 |
| Bulk density | g/ml | ≥0.60 | ≥0.60 | ≥0.65 | ≥0.75 |
| Wear ratio | % | ≤0.20 | ≤0.20 | ≤0.20 | ≤0.20 |
| Crushing strength | N | ≥40/mm ² | ≥90/mm ² | ≥35/piece | ≥100/piece |
| Static water adsorption | % | ≥21 | ≥21 | ≥21 | ≥21 |
| Water content as shipped | % | ≤1.5 | ≤1.5 | ≤1.5 | ≤1.5 |

Application

- 1) Drying of unsaturated hydrocarbons (e.g. ethylene)
- 2) Cracked Gas Drying
- 3) Drying of natural gas, if COS minimization is essential, or a minimum co-adsorption of hydrocarbons is required.
- 4) Drying of highly polar compounds, such as methanol and ethanol
- 5) Drying of liquid alcohol
- 6) Static, (non-regenerative) dehydration of insulating glass units, whether air filled or gas-filled.
- 7) Drying of refrigerants

