



SINTEPORITE 13X

MOLECULAR SIEVES - ZEOLITES

For several years SINTECO has been distributing molecular sieves - zeolites on the European market, for various industrial and petrochemical applications. Molecular sieves are a compound of sodium crystals that allow the absorption of moisture and other pollutants.



1. INTRODUCTION

Sinteporite 13X identifies the shape of a sodium crystal and the pore size (10 Angstrom) is much larger than type A crystals. It absorbs molecules with a kinetic diameter of less than 1.0 nm. It has the highest theoretical capacity of common absorbents and a very good mass transfer rate.

2. CHEMICAL FORMULA

$\text{Na}_{86} [(\text{AlO}_2)_{86}(\text{SiO}_2)_{106}] \cdot \text{XH}_2\text{O}$



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3. APPLICATIONS

Sinteporite 13X is mainly used for refining, as it implements simultaneous absorption for bi-molecule and tri-molecule and can be applied for liquefied and gaseous materials. The main substances absorbed are water, carbon dioxide, hydrogen sulphide and mercaptans.

The main uses are as follows:

- 1) Air refining (CO₂ and H₂O removal)
- 2) Removal of mercaptans and hydrogen sulfide from natural gas
- 3) Removal of mercaptans and hydrogen sulfide from liquid streams of hydrocarbons (LPG, butane, propane etc.)
- 4) PSA (Pressure Swing Adsorption) process of oxygen
- 5) Removal of solvent and grease from the special double glass

4. PHYSICAL PROPERTY

| Form | Ball Type (Ømm) | | Cylinder Type (inch) | |
|---------------------------------|--------------------------------------|-----------------|----------------------|------|
| | 1.8 - 2.4 (8*12) Standard product | 3.9 - 4.2 (4*8) | 1/16 | 1/8 |
| Particle size | 1.8 - 2.4 (8*12) Standard product | 3.9 - 4.2 (4*8) | 1/16 | 1/8 |
| Size ratio (%) | ≥98% | ≥98% | ≥98% | ≥98% |
| Crush strength (N) | ≥17 | ≥80 | ≥20 | ≥40 |
| Water adsorption (*) | ≥25% | | | |
| CO ₂ adsorption (**) | ≥18% | | | |
| Specific gravity (g/ml) | ≥0.62 | | ≥0.60 | |
| Pore size | 10 angstroms (1.0 nm) | | | |
| Crystal configuration | Cubic | | | |
| Abrasion | ≤0.3% | | | |
| Remained moisture | ≤1.5% | | | |
| LOI (575 °C,1 hr) | ≤1.6% | | | |

(*) 17.5 mm Hg, 25°C, 60% relative humidity

(**) 250 mm Hg, 25°C, 60% relative humidity



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5. REGENERATION

Sinteporite 13X can be regenerated by evacuation or purging, usually at elevated temperatures. The temperature of the purge gas must be high enough to bring the molecular sieve to a level of 250°C - 300°C. A properly regenerated molecular sieve can produce dew points below -100°C, mercaptans and CO₂ levels <2 ppmv.

6. STORAGE

Prevent humidity and contact with water, lubricating oil, acids and alkaline materials.

7. PACKAGING INFORMATION

All molecular sieves are supplied in steel drum of 135 kg net, each.



INFO AND REQUESTS:

For any type of technical information, documentation, and to receive offers, please contact us

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