



DATASHEET zeo® 13X

Molecular Sieves for elimination of trace contaminants

Pore size 9 Å (0.9 nm)

Chemical formula $\text{Na}_2\text{O} \cdot x \cdot \text{Al}_2\text{O}_3 \cdot X \cdot \text{m SiO}_2 \cdot X \cdot n \cdot \text{H}_2\text{O}$ ($m \leq 2.35$)

Resource base:

- Synthetic crystalline aluminosilicate with a regular micropore structure

Particular qualities:

- Highly selective adsorbent
- Capable of regeneration

Application:

- Non cryogenic oxygen enrichment from air using pressure (vacuum) swing adsorption (PSA/VPSA) technique
- Elimination of trace contaminants from air and other gases
- Desulphurization (sweetening) of natural gas and other fluids
- Removal of mercaptans
- For drying gases and liquids
- Regenerative thermos-chemical energy storage for generation of cold or heat
- Thermo-chemical energy storage

Items	Value	1.2 – 2 mm	1.6 – 2.5 mm	2.5 – 3.5 mm	2.5 – 5 mm
Beads Size Range	nominal, mm approx. mesh size	1.2 – 2.0 10 x 16	1.6 – 2.5 8 x 12	2.5 – 3.5 6 x 8	2.5 – 5.0 4 x 8
Bulk Density	compacted, g/l	655 – 700	655 – 700	655 – 700	655 - 700
Attrition (% wt.)	wt.-%	max. 0.2	max. 0.2	max. 0.2	max. 0.2
Crush Strength	N/bead	min. 10	min. 30	min. 40	min. 50
Moisture Content	as delivered, wt.-%	max. 1.0	max. 1.0	max. 1.0	max. 1.0
Water Adsorption Capacity*	55 % rel. hum., 20 °C, wt.-%	min. 26.5	min. 26.5	min. 26.5	min. 26.5
CO₂ Adsorption Capacity* at 2.4 mbar CO₂ pressure at 25 °C	cm ³ (STP) / g	min. 24.0	min. 24.0	min. 24.0	min. 24.0

The typical product properties are based on average values from current production.

The specification data represent our standard product specifications.

Regeneration:

Regeneration of molecular sieve **13X** may be carried out by increasing the temperature and/or reducing the pressure or using a suitable purge gas, resp. The regeneration mode to be used, however, always depends on the particular conditions of the application case. Especially the possibly limited stability of a certain molecular sieve against thermal and hydrothermal exposure needs be taken into consideration. In the case of doubt, please contact our technical service staff.

Standard packaging:

650kg, net weight Big Bag with inliner

135kg, net weight steel drum