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Product Data Sheet

BASF 13X Molecular Sieve

BASF 13X Molecular Sieve is a synthetic crystalline aluminosilicate with a regular micropore structure

Zeolite Structure	Faujasite type (FAU)
Pore Size	10 Å (1.0 nm)
Chemical Formula	Na_2O . Al_2O_3 . m SiO_2 . n H_2O (m ≤ 2.35)

Product Applications

BASF 13X Molecular Sieve is a highly selective adsorbent designed for the elimination of trace contaminants from air and other gases. It can also be used for the desulphurization (sweetening) of natural gas and other fluids, especially for the removal of mercaptanes, and for drying of gases and liquids.

Another field of application for BASF 13X is the non-cryogenic oxygen enrichment from air using pressure (vacuum) swing adsorption (PSA/VPSA) technique. It can be used as regenerative thermo-chemical energy storage for the generation of cold or heat, possibly using environmentally sound primary energy sources (sun energy, exhaust heat etc.).

Regeneration

Regeneration of BASF 13X Molecular Sieve may be carried out by increasing the temperature and/or reducing the pressure or using a suitable purge gas. The purge gas temperature must be sufficiently high to warm up the molecular sieve to a level of 200 °C to 300 °C, but not exceeding 450 °C. The appearance of so-called hydrothermal conditions during the regeneration should be avoided as far as possible. BASF 13X Molecular Sieve is nontoxic.

Typical Properties		
Beads size range, nominal, mm	1.6 – 2.5	2.5 – 5.0
Mesh Range, approx	8 x 12	4 x 8
Bulk Density, compacted, g/L	655 - 700	655 - 700
Attrition, % wt.	Max 0.2	Max 0.2
Crush Strength, N/bead	Min 25	Min 50
Moisture Content (as delivered, % wt)	Max 1.0	Max 1.0
Water Adsorption Capacity*, 55% relative humidity, 20 °C, % wt	Min 26.5	Min 26.5

* Sample activated. Other beads and sizes available on request.

Packaging

- 216 L (135 kg) airtight steel drums
- Polypropylene inliner equipped big bags of different sizes (650 or 800 kg net) supersacks

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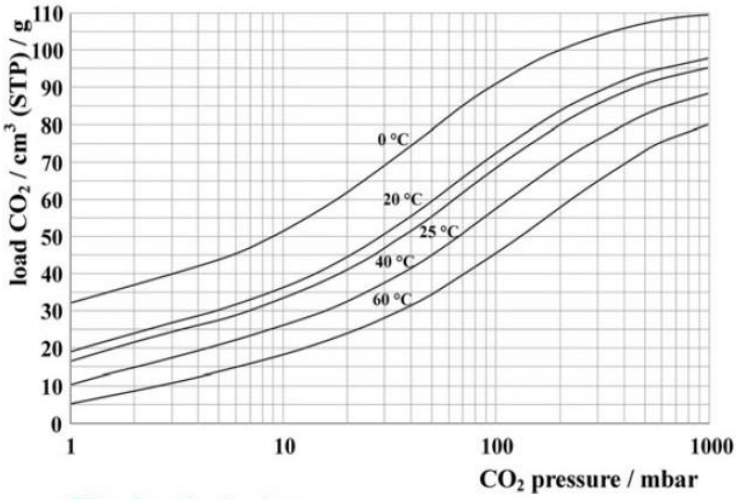
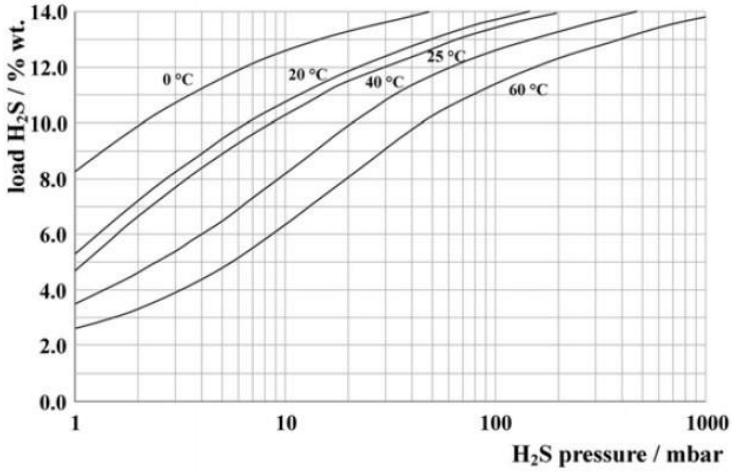
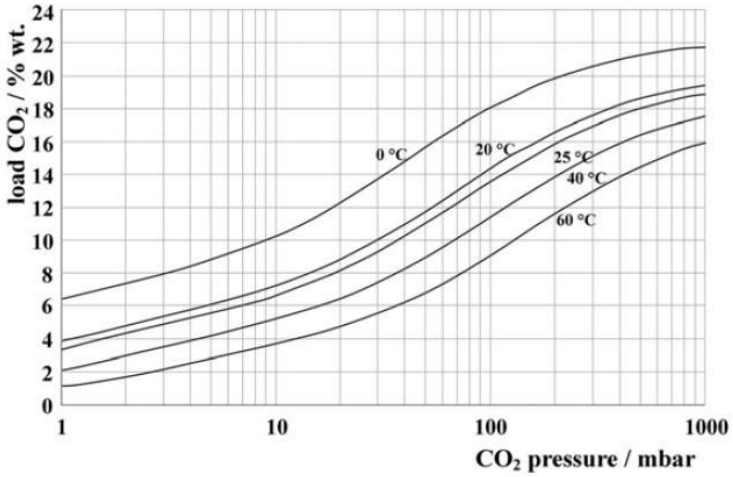


CO_2 adsorption isosteres



H_2S adsorption isotherms



CO_2 adsorption isotherms

About Us

BASF is a leading global manufacturer of catalysts for the chemical industry, with solutions across the chemical value chain. The business comprises chemical catalysts and adsorbents, refinery catalysts and custom catalysts. In the process catalysts business, priority is given to developing new and improved products that enable the chemical industry transformation to net-zero emissions.

The division's portfolio also includes battery materials and recycling solutions, as well as environmental catalysts and metal solutions. Customers from a variety of industries including Automotive & Transportation, Chemicals, Plastics or Energy & Resources benefit from our innovative solutions. Further information on BASF's Catalysts division is available on the Internet at www.catalysts.basf.com.

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