



The Chemical Company

Product Datasheet

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

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 non-toxic.

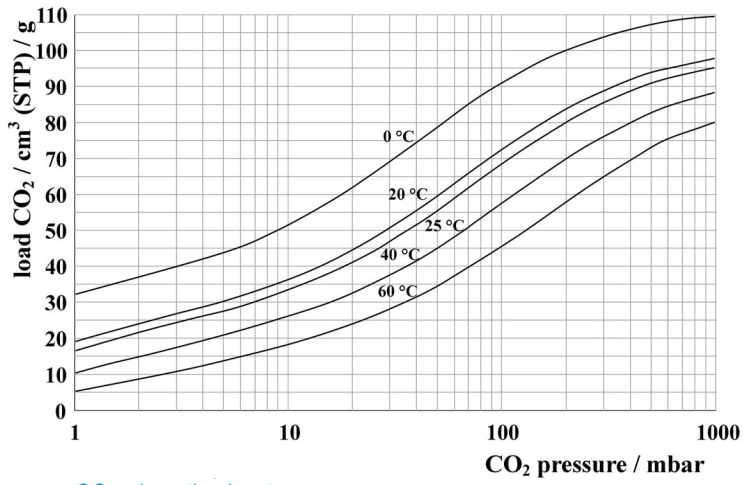
Packaging

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

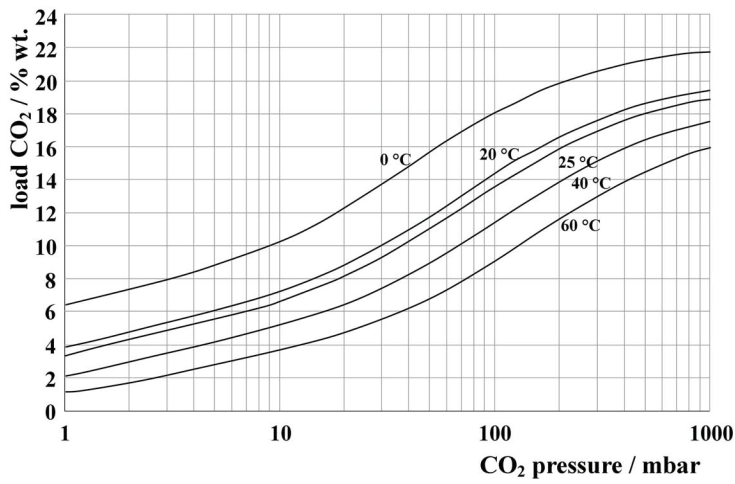
Typical Properties				
Beads size range, nominal, mm	1.2 – 2.0	1.6 – 2.5	2.5 – 3.5	2.5 – 5.0
Mesh Range, approx	10 x 16	8 x 12	6 x 8	4 x 8
Bulk Density, compacted, g/L	680 - 725	680 – 725	680 – 725	680 – 725
Attrition, % wt.	Max 0.2	Max 0.2	Max 0.2	Max 0.2
Crush Strength, N/bead	Min 10	Min 25	Min 40	Min 50
Moisture Content (as delivered, % wt)	Max 1.0	Max 1.0	Max 1.0	Max 1.0
Water Adsorption Capacity*, 55% relative humidity, 20 °C, % wt	Min 26.5	Min 26.5	Min 26.5	Min 26.5

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

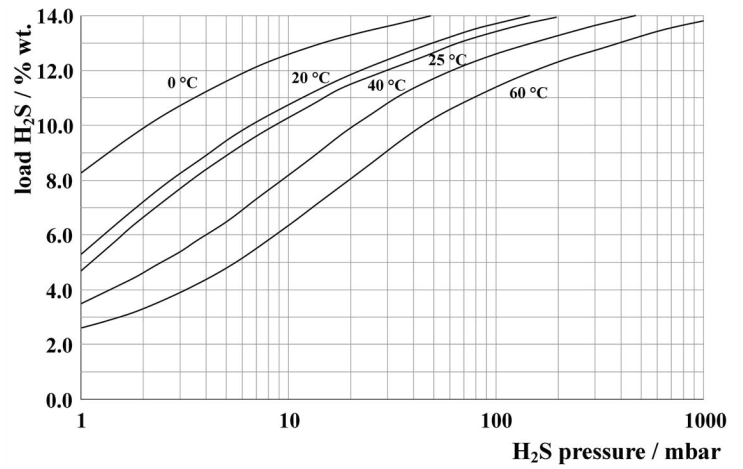




CO₂ adsorption isosteres



CO₂ adsorption isotherms



H₂S adsorption isotherms

About Us

BASF's Catalysts division is the world's leading supplier of environmental and process catalysts. The group offers exceptional expertise in the development of technologies that protect the air we breathe, produce the fuels that power our world and ensure efficient production of a wide variety of chemicals, plastics and other products. By leveraging our industry-leading R&D platforms, passion for innovation and deep knowledge of precious and base metals, BASF's Catalysts division develops unique, proprietary catalyst and adsorbent solutions that drive customer success.

BASF - The Chemical Company

Americas

BASF Corporation
25 Middlesex/Essex Turnpike
Iselin, New Jersey, 08830, USA
Tel: +1-732-205-5000
Fax: +1-732-205-7725
Email: catalysts-america@basf.com

Asia Pacific

BASF East Asia Regional HQ Ltd.
45th Floor, Jardine House
No. 1 Connaught Place
Central, Hong Kong
Tel: +852-2731-0191
Fax: +852-2731-5634
Email: catalysts-asia@basf.com

Europe, Middle East, Africa

BASF SE
67056 Ludwigshafen, Germany
Tel: +49-621-60-21153
Fax: +49-621-60-43023
Email: catalysts-europe@basf.com

Although all statements and information in this publication are believed to be accurate and reliable, they are presented gratis and for guidance only, and risks and liability for results obtained by use of the products or application of the suggestions described are assumed by the user. NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH. Statements or suggestions concerning possible use of the products are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent. The user should not assume that toxicity data and safety measures are indicated or that other measures may not be required.
© 2011 BASF