



MOLSIV™ 13X Adsorbent

Description

13X adsorbent is a clay-bound sodium form of Type X molecular sieve. 13X adsorbent will adsorb molecules with critical diameters up to 8 angstroms.

Application

13X adsorbent is recommended for the dehydration of air for use in hopper (plastic) air and compressed air drying systems. 13X molecular sieve can adsorb both moisture and polymerization by-products such as acetaldehyde and ethylene glycol. Its exceptional product strength makes 13X adsorbent ideal for sachet and other custom packaged desiccating needs.

Typical physical properties

13X molecular sieve is available in spherical or extrudate form. The diameters for the spheres or “beads” are shown below. The diameters for the extrudates or “pellets” are also shown; the length is approximately twice the diameter.

	10x20	8x12	6x8	4x8	1/16"	1/8"	TRISIV
	<u>Beads</u>	<u>Beads</u>	<u>Beads</u>	<u>Beads</u>	<u>Pellets</u>	<u>Pellets</u>	<u>Pellets</u>
Nominal pore diameter (Å)	8	8	8	8	8	8	8
Particle diameter (mm)	1.4	2	3	4	1.6	3.2	3.4
Sock loaded density (lb/ft3)	40	40	40	40	39	37.5	38
(kg/m3)	641	641	641	641	625	601	609
Crush strength (lbs)	N/A	8	12	18	7	15	15
(kgs)	N/A	3.5	5.4	8	3	6.5	6.8
Heat of adsorption (Btu/lb H2O)	1800	1800	1800	1800	1800	1800	1800
(kJ/kg H2O)	4186	4186	4186	4186	4186	4186	4186
Equilibrium H2O capacity* (wt-%)	26	26	26	26	26	26	26
Moisture content (wt-%)	1	1	1	1	1	1	1

*Measured at 17.5 mm Hg and 25°C

Chemical formula

$M_x [(AlO_2)_x(SiO_2)_y] \cdot z H_2O [M=Na]$

Regeneration

13X molecular sieve can be regenerated for reuse by purging or evacuating at elevated temperatures.

Safety and handling

See the brochure “Precautions and Safe Practices for Handling Molecular Sieves in Process Units” or call your local representative.

For more information please contact us:

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