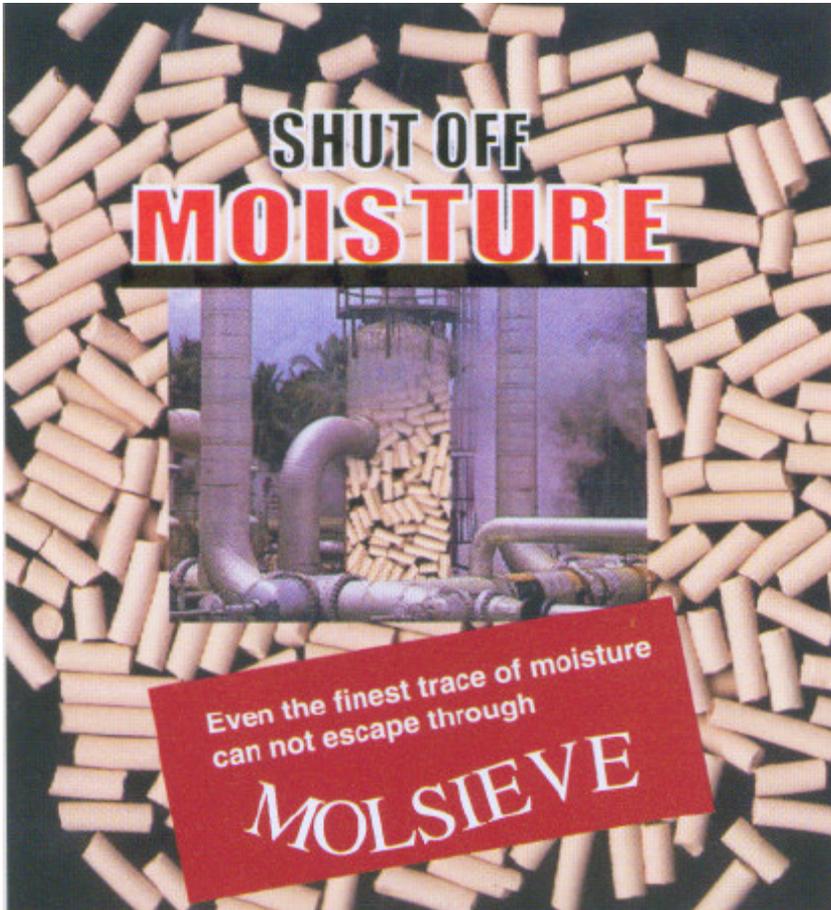


MOLECULAR SIEVES 3A



Molsieve 3A is a crystalline aluminosilicate with SiO_2 to Al_2O_3 as 2:1. It is formed by extensive cross-linking of AlO_4 & SiO_4 tetrahedra, resulting in a uniform pore opening of 0.3 nm. Keeping in mind the customers requirements, our manufacturers manufacture the 3A Molecular Sieve in both extruded pellets & beads form by the state of the art technology in its plant at Mehsana. The products have equal to & in some cases better properties than what have been specified in the Bureau of Indian Standards: BIS 14211 : 1994. Specifically it has very high adsorption capacity, &

mechanical strength, & at the same time very low attrition loss. We use clays from our own mines in the manufacture of this product, ensuring better control & uniformity in the quality of the final product.

Packing:

MOLSIEVE 3A is packed for industrial use in airtight MS drums under hot conditions with proper sealing arrangements so that there is no ingress of moisture during storage & transportation. **Standard Packing:** 200/210 Ltr. Drum. **Size:** 570 X 860 mm



Specifications:

Nominal Dia : 3A ^o		1A ^o = 10 ⁻⁸ cm					
Form : Cylindrical pellets & Spheres							
	Unit	1.5 mm dia cylindrical pellets		3.0 mm dia Cylindrical Pellets		2-4 mm spheres	
		Range	Typical	Range	Typical	Range	Typical
Equilibrium Water Adsorption Capacity at 30 deg.C							
15% RH	% w/w	19-23	21.5	19.0-23.0	21.5	19.0-23.0	21.5
75% RH	% w/w	22-26	24.0	22-26	24.0	22-26	24.0
Thermal Stability after 600 Deg.C Equilibrium Water Adsorption Capacity at 30 Deg.C & 15% RH	% w/w	19-23	21.5	19.0-23.0	21.5	19.0-23.0	21.5
Crushing Strength (Active)	Kg.	3.0-7.0	5.0	5-12	7.0	3-7	5.0
Attrition Loss on Tumbling	% w/w	0.02-0.15	0.10	0.02-0.3	0.15	0.02-0.25	0.1
Free Moisture (Max.)	% w/w	-	1.5	-	1.5	-	1.5
Bulk Density	gms/cc	0.68-0.78	0.75	0.68-0.78	0.74	0.75-0.85	0.81
Bed Crushing Strength	% w/w	80-90	84.0	80-90	87.0	80-90	85.0

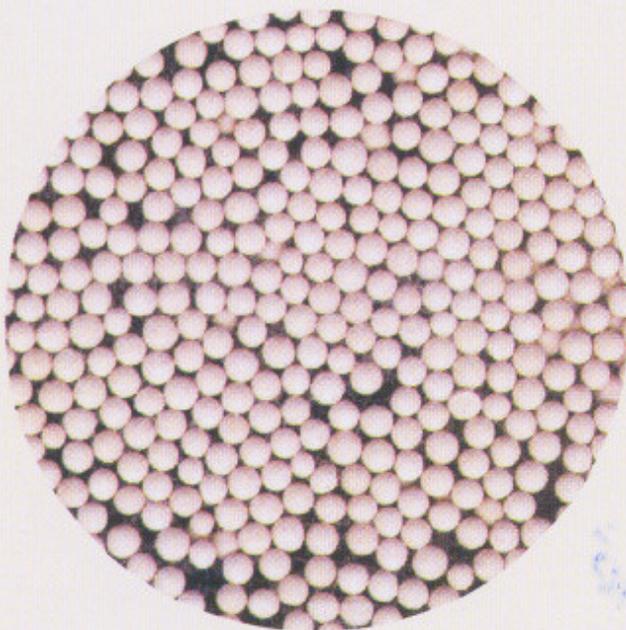
Life:

MOLSIEVES 3A has infinite shelf life, when stored in packed conditions. The active service life would however depend on the operating conditions of the plant, actual application & the usage by the customer.





▲ MOLSIEVE 3A in pellets form



▲ MOLSIEVE 3A in Spheres form

Loading:

MOLSIEVE 3A does not require any special precaution or procedure during loading. However, the health of the grid support is to be checked, & the vessel is to be cleaned of dust, foreign particles, etc. before the adsorbent is loaded. During actual loading, the material should be poured carefully through funnel & chute so as to avoid dusting & attrition. The drums should not be kept in open condition, as the adsorbent would adsorb moisture. In case of prolonged exposure of the adsorbent to moisture during storage / loading, it may require prolonged regeneration at higher temperature to restore its full adsorptive capacity.

Material Safety Data:

The product as such is neither flammable nor toxic. Over all, it is not hazardous. Repeated exposure may irritate skin, eyes & respiratory system. The product gets hot as it is first exposed to atmosphere due to adsorption of moisture.

Regeneration:

MOLSIEVES 3A should be regenerated thermally or by evacuation with simultaneous

purge. For thermal regeneration, the adsorbent may be heated to 200 - 270 °C to remove adsorbed water. The exact regeneration conditions (temperature,



purge gas flow, etc.) depends on the application & other operating conditions. For better performance over prolonged period, the MOLSIEVES 3A should not be exposed to temperatures above 400°C & hot gases containing high moisture should be avoided.

Applications:

1. Cracked gas & Olefins Drying.
2. Liquid or gas Propylene Drying.
3. Drying of organic liquids like methanol, olefins, ethanol (with denaturant methanol)
4. Insulating glass manufacturing.
5. Drying of CO₂, solvents, reactant mixtures, gases & liquids in the pharmaceuticals, paints chemicals & allied industries.

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