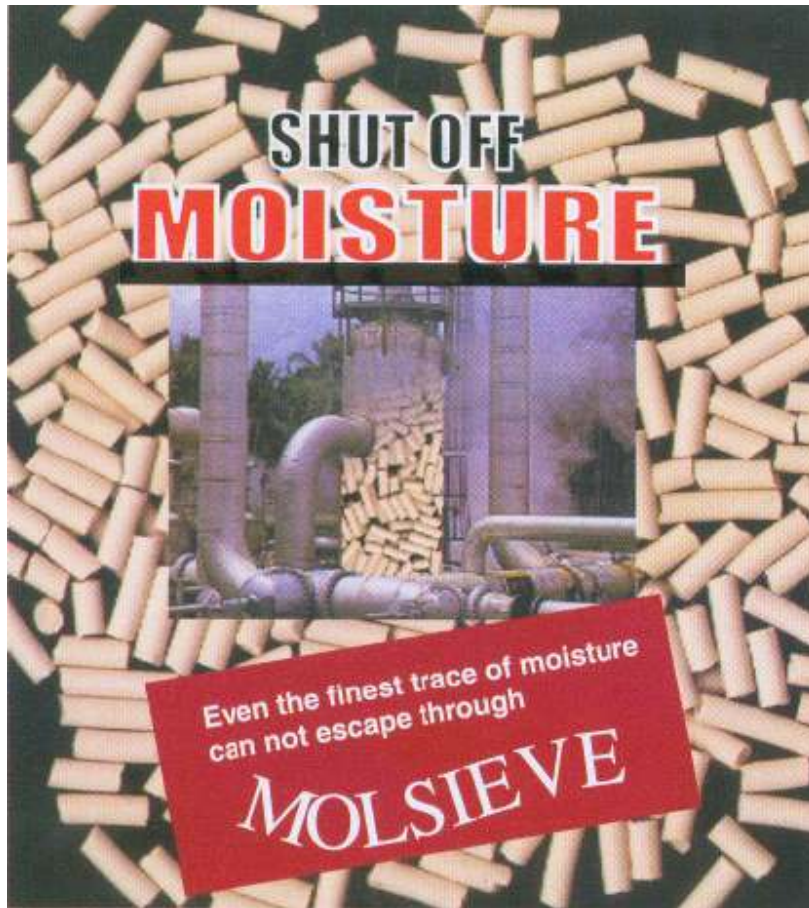


MOLECULAR SIEVE 4A



Molsieve 4A sieve 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 0.4 nm. Keeping in mind the customers requirements, our manufacturers manufacture the 4A Molecular Sieve in forms like: 3 mm dia extruded pellets & 2 - 4 mm dia spheres 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 water adsorption capacity and mechanical strength, and at the same time very low attrition loss. Its main application

is in air & associated gas drying; however it may also be used favorably in place of activated alumina, where a lower dew point is required. The robust nature of the product makes it suitable for high pressure applications. 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 4A 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: 210 Ltr. Drum. **Size:** 565 X 850 mm

Specifications:

	Unit	3.0 mm dia cylindrical pellets		2-4mm Spheres	
		Range	Typical	Range	Typical
Equilibrium Water Adsorption Capacity at 30 ^o C and 15% RH	%w/w	18.0 - 20.0	18.5	18.0 - 22.0	19.0
Equilibrium Water Adsorption Capacity at 30 ^o C and 75% RH	%w/w	20.0 - 23.0	21.5	20.0 - 23.0	22.0
Thermal stability after 600 ^o C Equilibrium Water Adsorption Capacity at 30 ^o C and 15% RH	%w/w	18.0 - 20.0	18.5	18.0 - 20.0	19.0
Crushing strength	Kg	6.0-16.0	10.0	4.0-8.0	6.0
Attrition Loss on Tumbling	% w/w	0.02-0.3	0.15	0.02-0.15	0.05
Bulk Density	Kg/Lit	0.60 - 0.70	0.65	0.75 - 0.85	0.81
Free Moisture(Max.)	% w/w	1.5	-	1.5	-
Bed Crushing Strength	%	80-90	88	80-90	88

Life:

MOLSIEVE 4A has infinite shelf life, when stored in packed condition. The active service life would depend, however on the operating conditions of the plant, actual application & usage by the customer.





MOLSIEVE 4A IN PELLETS FORM:

Loading:

MOLSIEVE 4A 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.

MOLSIEVE 4A IN SPHERES FORM:



Regeneration:

MOLSIEVE 4A should be regenerated thermally or by evacuation with simultaneous purge. For thermal regeneration, the adsorbent may be heated to 150° to 200°C by a hot & dry gas. However, the exact regeneration condition (temperature, purge gas flow, etc.) depends on the application, feed quality & other operating conditions. For a better performance over a prolonged period, this MOLSIEVE 4A should not be exposed to temperatures above 450°C repeatedly.

Application:

1. Moisture removal / drying from associated gas (LPG) down to dew point of around 100°C.
2. Simultaneous removal of moisture & CO₂ from gaseous streams.
3. Organic liquid drying.
4. Removal of moisture & CO₂ from feed air to cryogenic plants (N₂ – O₂ plants)
5. Air drying for dew point of less than -60°C

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