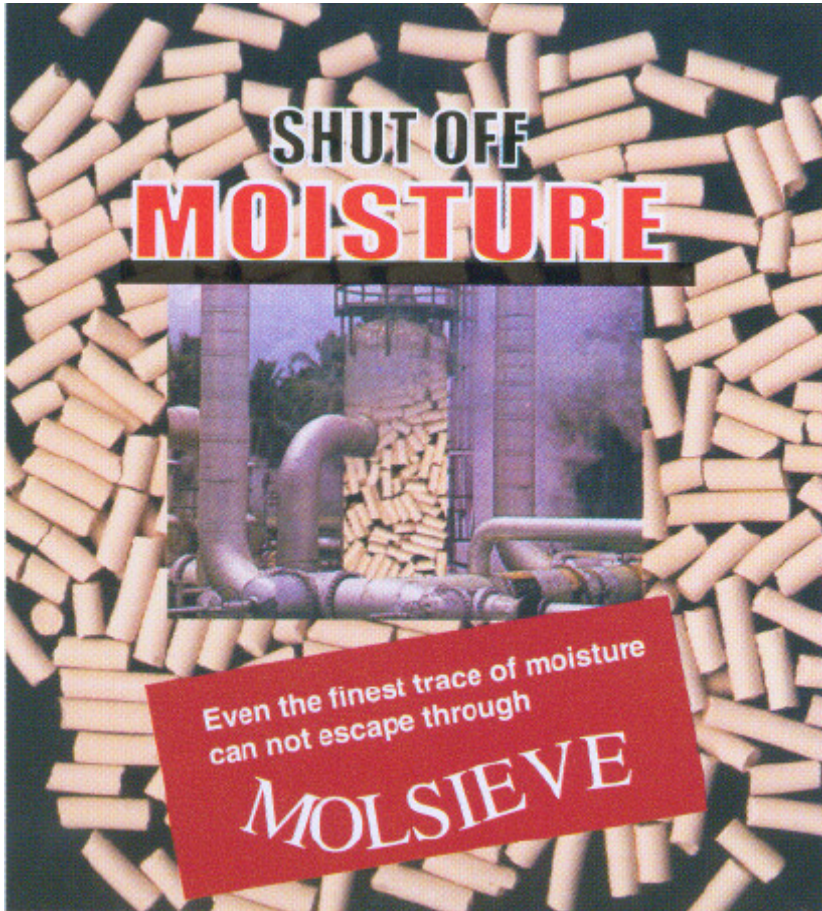


MOLECULAR SIEVE 4A - SP



MOLSIEVE 4A – SP are crystalline aluminosilicate with SiO_2 , 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. Our manufacturers manufacture 4A – SP molecular sieves in the form of extruded pellets & spheres in the State of the Art technology plant at Mehsana, Gujarat. The products comfortably conform to the specifications specified in the Bureau of Indian Standards: BIS 14211:1994. Specifically it has very high water 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 4A - SP 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 : 4A ^o		1A ^o = 10 ⁻⁸ cm					
Form : Cylindrical pellets & Spheres							
		1.5 mm dia cylindrical pellets		3.0 mm dia Cylindrical Pellets		2-4 mm spheres	
	Unit	Range	Typical	Range	Typical	Range	Typical
Equilibrium Water Adsorption Capacity at 30 deg.C							
15% RH	% w/w	20-24	22.0	20-24	22.0	20-23	21.5
75% RH	% w/w	23-26	25	23-26	25.0	23-26	24.5
Thermal Stability after 600 Deg.C Equilibrium Water Adsorption Capacity at 30 Deg.C & 15% RH	% w/w	20-24	22.0	20-24	22.0	20-23	21.5
Crushing Strength (Active)	Kg.	3.0-7.0	5.0	8.0-17.0	12.0	4.0-8.0	6.0
Attrition Loss on Tumbling	% w/w	0.02-0.15	0.1	0.02-0.2	0.1	0.02-0.15	0.10
Free Moisture (Max.)	% w/w	1.5	-	1.5	-	1.5	-
Bulk Density	gms/ cc	0.65-0.78	0.70	0.65-0.78	0.70	0.75-0.85	0.81
Bed Crushing Strength	% w/w	80-90	87.0	85-92	90.0	80-90	88.0

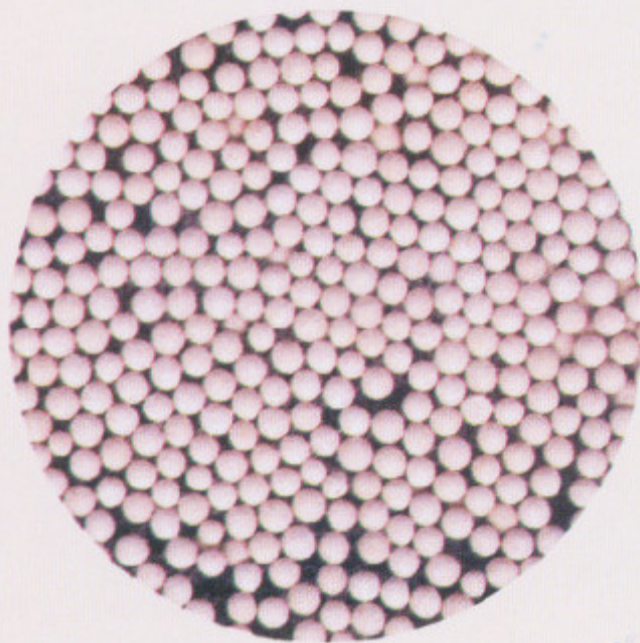
Life:

MOLSIEVE 4A - SP 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.





▲ MOLSIIEVE 4A-SP in pellets form



▲ MOLSIIEVE 4A-SP in Spheres form

Loading:

MOLSIIEVE 4A - SP 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:

MOLSIEVE 4A - SP 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 & hot gases containing high moisture should be avoided.

Application:

1. Drying of natural gas & variety of other hydrocarbon streams including polar liquid.
2. Drying of Benzene, hexane, kerosene, chloroform, methylene chloride, naphtha, H₂ rich gas, reformer – recycle gas, etc.
3. Removal of NH₃ & moisture from purge gas in fertilizer plant.
4. Removal of CO₂ & methanol in Nitrogen wash unit in Fertilizer plant.
5. Drying of solvents, reactant mixtures, gases & liquids in pharmaceuticals, paints, chemicals & allied industries.

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