BOLETIM TÉCNICO

MOLECULAR SIEVE 5A (rev01)

Introduction

The Molecular Sieve type 5A is an alkali alumina silicate; it is the calcium form of the Type A crystal structure. Type 5A has an effective pore opening of 5 angstroms (0.5 nm). It will adsorb molecules with a kinetic diameter of less than 5 Angstrom and exclude those larger. It is especially suitable for PSA adsorption applications where it may be used for the separation of normal- and iso- paraffins (C4 to C6 species), in PSA hydrogen purification and in oxygen concentrators.

Technical Parameter:

Model	5A	
Color	Light gray	
Nominal pore diameter	05 angstroms	
Shape	Sphere (ball)	
Diameter (mm)	1,7-2,5	3,0-5,0
Size ratio up to grade (%)	≥98	≥98
Bulk density (g/ml)	≥0.72	≥0.7
Wear ratio (%)	≤0.20	≤0.20
Crushing strength (N)	≥45/piece	≥100/piece
Static H_2O adsorption (%)	≥22	≥22
Water content (%)	≤1.5	≤1.5
Typical Chemical Formula	0.7CaO . 0.3Na2O . Al2O3 . 2SiO2 . 4.5H2O （SiO2 : Al2O3 ≈2）	
Typical Application	a) The strong ionic forces of the divalent calcium ion makes it an excellent adsorbent to remove water, CO2, H2S from sour natural gas streams, while mini missing COS formation. Light mercaptans are also adsorbed. b) Separation of normal- and iso paraffin's. c) Production of high purity N2, O2, H2 and inert gases from mixed gas streams. d) Static, (non-regenerative) dehydration of insulating glass units, whether air filled or gas-filled.	
Package :	Carton box; Carton drum; Steel drum	
MOQ:	1 Metric Ton	

Regeneration:

The molecular sieve Type 5A can be regenerated by either heating in the case of thermal swing processes; or by lowering the pressure in the case of pressure swing processes. To remove moisture from a 5A molecular sieve, a temperature of 250-300°C is required. A properly regenerated molecular sieve can give moisture dew points below -100°C, or mercaptans or CO2 levels below 2 ppm. The outlet concentrations on a pressure swing process will depend on the gas present, and on the conditions of the process.

Attention

To avoid damp and pre-adsorption of organic before running, or must to be reactivated.

Para maiores informações, consultar o departamento técnico da MAISQUIMICA.

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