

CAGESPHERE® 5A / 3.0 – 5.0mm

Molecular sieve 5A

Section 1: Information about the supplier/distributor

GIEBEL Desiccants GmbH
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Section 2: Name of substance

Chemical Product Name:	Alkali Alumina Silicate; Calcium form of type A crystal structure
Composition:	0.7CaO / 0.3Na ₂ O / Al ₂ O ₃ / 2SiO ₂ / 4.5H ₂ O / (SiO ₂ :Al ₂ O ₃ ≈2)
CAS No.:	1318-02-1
EC No.:	215-283-8
Binder:	Clay
Tannin:	Myrica

Section 3: Typical Application

- a) The strong ionic forces of the divalent calcium ion make it an excellent adsorbent for removing water, CO₂ and H₂S from acidic natural gas streams while minimizing COS formation. Light mercaptans are also adsorbed.
- b) Separation of normal and isoparaffins.
- c) Generation 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.

Section 4: Specifications

Structure:	Calcium form of the type A crystal structure
Cations:	Alkali Alumina Silicate
Appearance and shape:	Beige, solid balls
Particle size:	3.0 – 5.0 mm
Qualified particles:	99,2 %
Bulk density:	0.75 – 0.78 g/ml
Crushing strength:	100 N/Piece
Abrasion rate:	0,08 %
Static H ₂ O adsorption:	21,5 %
Water content:	1,1 %
Regeneration temperature:	300°C

Section 5: Regeneration:

Type 5A molecular sieves can be regenerated either by 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 300°C is required. A properly regenerated molecular sieve can reach moisture dew points below -100°C. The initial concentrations in a pressure swing method depend on the gas present and the process conditions.