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DATA SHEET

Commodity: Molecular sieve 5 A **Composition:** 0.80 CaO : 0.20 Na₂O : 1 Al₂O₃: 2.0 ± 0.1 SiO₂: x H₂O

Description: Divalent calcium ions in place of sodium cations give apertures of ~5Å which exclude molecules of effective diameter >5Å, e.g., all 4-carbon rings, and iso-compounds

Applications:

Separation of normal paraffin from branched-chain and cyclic hydrocarbons

Molecules adsorbed include nC₄H₁₀, nC₄H₉OH, C₃H₈ to C₂₂H₄₆, and dichlorodifluoro-methane (Freon 12®).

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 minimizing COS formation. Light mercaptan are also adsorbed.

Production of high purity N₂, O₂, H₂ and inert gases from mixed gas streams

Regeneration:

1. Dehydration: At 200-350°C and in pressure of 0.3~0.5kg/cm³, let a dryer gas goes through the sieve bed for 3~4hours. As the temperature in outlet at 150~180°C, let the bed cool off
2. Removal of organic components: Replace the organic components with steam, then dehydrate

Specification:

Specification	For air separation using: Balls		For paraffin hydrocarbon separation in petroleum using	
	5ABI	5ABII	Ball:5BIII	Pellt:5APII
Type	5ABI	5ABII	Ball:5BIII	Pellt:5APII
Diameter (mm)	2.0~3.0	4~6	3-5	3-5(1/8")
Bulk density (kg/m ³) min	660	620	620	600
Crushing strength (N)min	25	50	60	22
Attrition loss (%Wt) max	0.5	0.5	0.50	0.55
Coefficient of oxygen	2.40-2.75	2.40-2.75	n-Hexane adsorption(P/ps=0.1%) 12%max	n-Hexane adsorption(P/ps=0.1%) 12%max
Moisture adsorption % min	21	21	21	21
Remaining value of oxygen ml/g	2.6	2.6		