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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 | |
|---------------------------------------|---------------------------------|-----------|--|---|
| | 5ABII | 5ABII | Ball:5BIII | Pellt:5APII |
| Type | 5ABII | 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 | | |