Title (en)

PROCESS FOR SEPARATING N-OLEFINS AND N-PARAFFINS FROM HYDROCARBON MIXTURES

Publication

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Application

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Priority

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Abstract (en)

[origin: EP0372939A1] This invention relates to a separation process for the adsorption-desorption of n-olefin n-paraffin mixtures in zeolites, particularly acid free silicalite molecular sieves. Preferred hydrocarbon feeds for the present separation process are C9 to C19 distillates derived via the thermal cracking of petroleum residua. Such distillates, e.g. light FLEXICOKER and Fluid-coker gas oils contain 1-n-olefins and n-paraffins as the main types of components and minor components of branched olefins and paraffins as well as aromatic hydrocarbons and sulfur compounds. Mixtures mostly consisting of 1-n-olefins and n-paraffins can be separated from such coker distillates containing relatively high concentrations of sulfur compounds via the present process. The olefin components of n-olefin and n-paraffin mixture products of the present molecular sieve separation can be utilized as reactants in polymerization, alkylation and carbonylation reactions, wherein the unconverted paraffin components are subsequently separated by distillation. Such a three step sieving, conversion, distillation process is particularly attractive as a low cost approach for the preparation of polyolefin based synthetic lubricants.

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