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PROCESS FOR PREPARING A ZEOLITE CATALYST FOR THE ISOMERIZING
OF LINEAR OLEFINS TO ISOOLEFINS

ABSTRACT

An active and stable catalyst for isomerizing linear olefins to methyl branched isoolefins is provided by (a) mixing (i) a zeolite powder containing at least one zeolite with at least one one-dimensional pore structure having pore size small enough to retard by-product dimerization and coke formation and large enough to permit entry of the linear olefin and allow formation of the methyl branched isoolefin, (ii) an alumina-containing binder, (iii) water, (iv) at least one acid selected from monocarboxylic acids and inorganic acids and (v) at least one polycarboxylic acid; (b) forming a pellet of the mixture; and (c) calcining the pellet. The resulting catalyst has superior selectivity, higher maximum product concentration in the product stream and longer run length for isomerizing linear olefins to their corresponding isoolefins.