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ACTION

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(54) Title: A PROCESS FOR THE ISOMERIZATION OF AN OLEFIN

(57) Abstract: A process for the double bond isomerization of an olefin, which process comprises contacting a feed comprising the olefin with an isomerization catalyst, wherein prior to contacting the feed with the isomerization catalyst one or more components of the feed are pretreated by contacting with a pretreating material which comprises a zeolite which has a pore size of at least 0.35 nm; a plant which is suitable for carrying out the isomerization process; and a process for treating an olefin mixture which comprises a linear α -olefin and which is of the general formula $\text{CH}_2=\text{C}(\text{R}^1)\text{R}^2$, wherein R^1 represents an ethyl group and R^2 represents a linear 1-alkyl group, which process comprises isomerising linear 1-alkyl group, which process comprises isomerising the vinylidene olefin to form a double bond isomer of the vinylidene olefin by contacting a feed comprising the olefin mixture with an isomerization catalyst, and separating the linear α -olefin from the double bond isomer of the vinylidene olefin, wherein prior to contacting the feed with the isomerization catalyst one or more components of the feed are pretreated by contacting with a pretreating material which comprises a zeolite which has a pore size of at least 0.35 nm.