Process for preparing isoolefins

Abstract:

The present invention relates to a continuous process for preparing isoolefins having 4 to 6 carbon atoms by cleaving compounds of the formula I

R_1-O-R_2 (I)

where R_1 = a tertiary alkyl radical having 4 to 6 carbon atoms and R_2 = H or an alkyl radical in the gas phase over a solid catalyst in the temperature range of 200 to 400°C at a pressure of 0.1 to 1.2 MPa in a reactor which is equipped with a heating jacket and is heated with a liquid heat carrier, characterized in that the temperature drop in the catalyst zone at any point in relation to the entrance temperature is less than 50°C, in that the reaction mixture in the reactor and the heat carrier in the jacket flow through the reactor in cocurrent, and in that the temperature difference of the heat carrier between the feed point to the reactor and outlet from the reactor is adjusted to less than 40°C.