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(54) Title: CATALYST AND A PROCESS USING THE CATALYST

(57) **Abstract:** A catalyst which comprises a carrier and silver deposited on the carrier, which carrier has a surface area of at least 1 m<sup>2</sup>/g, and a pore size distribution such that pores with diameters in the range of from 0.2 to 10 µm represent at least 70 % of the total pore volume and such pores together provide a pore volume of at least 0.27 ml/g, relative to the weight of the carrier; a process for the preparation of a catalyst which process comprises depositing silver on a carrier, wherein the carrier has been obtained by a method which comprises forming a mixture comprising: a) from 50 to 90 %w of a first particulate a-alumina having an average particle size (d<sub>50</sub>) of from more than 10 up to 100 µm; and b) from 10 to 50 %w of a second particulate a-alumina having an average particle size (d<sub>50</sub>) of from 1 to 10 µm; %w being based on the total weight of a-alumina in the mixture; and shaping the mixture into formed bodies and firing the formed bodies to form the carrier, and a process for the epoxidation of an olefin, which process comprises reacting an olefin with oxygen in the presence of a said catalyst.



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