ABSTRACT OF THE DISCLOSURE

TITANIUM-CONTAINING SOLID CATALYST

A titanium-containing solid catalyst used for producing an oxirane compound by reacting an olefin type compound with an organic hydroperoxide, wherein the catalyst is obtainable by at least one method selected from the following (1) to (3):

(1) a titanium compound is supported on silica having an average pore diameter (D) measured by a mercury pressing method of 5 nm or more and having pore distribution in which at least 60% of pore volume is composed of pores having a pore diameter within the range of D ± 0.3 D (nm), and is calcined ,

(2) silica is impregnated in water, then dried, and a titanium compound is supported on the silica, then calcined ,

(3) silica is impregnated in a titanium-containing impregnation solution satisfying the following [formula-1], and is calcined :

$A/B \leqq 0.2$ [formula-1]

A: mol number of metal titanium in the impregnation solution

B: mol number of a silanol group existing in silica.