ABSTRACT

PROCESS FOR PRODUCING TITANIUM-CONTAINING SILICON OXIDE CATALYST, THE CATALYST, AND PROCESS FOR PRODUCING OLEFIN OXIDE COMPOUND WITH THE CATALYST

A process for producing a titanium-containing silicon oxide catalyst which comprises the following steps (A) and (B); and a catalyst obtained by the process. Step (A): a step in which a silica source part or all of which is a silicon compound having a silicon atom having a hydrocarbon group directly bonded thereto is mixed by stirring with a titanium source and a molding-agent solution to obtain a solid containing the catalyst ingredient and the molding agent, the proportion of water in the solvent in the molding-agent solution being 50 wt.% or lower or a step in which a silica source which comprises a combination of an organic silicon source comprising a silicon compound having a silicon atom having a hydrocarbon group directly bonded thereto with a silicon compound having no carbon-silicon bonds is mixed by stirring with a titanium source and a molding-agent solution to obtain a solid containing the catalyst ingredient and the molding agent, the addition of the silica source to the molding-agent solution being conducted so as to satisfy the relationship: (amount of the organic silica source added in the first half)>(amount of the organic silica source added in the latter half). Step B: a step in which the molding agent is removed from the solid obtained in the step (A).