

ABSTRACT

PROCESS FOR PRODUCING PARTICLES AND COATING FILMS OF TITANIUM OXIDE

The present invention relates to a process for producing titanium oxide particles and a process for producing a titanium oxide coating film. The titanium oxide particles are produced by subjecting a suspension of titanium oxide fine particles to a hydrothermal treatment at 100°C or higher at a pH of a specific range to carry out crystal growth of the fine particles. The titanium oxide coating film is produced by suspending the thus obtained titanium oxide particles in water, adjusting the suspension to a pH of a specific range, coating the suspension on a support and then firing the coat to allow the titanium oxide particles to firmly adhere to the support.

The titanium oxide particles and titanium oxide coating film obtained according to the present invention are used as pigments, ultraviolet absorbers, fillers, optical materials, electronic material, optoelectric transducing materials, decorative materials, catalysts, photocatalysts, catalyst carriers, adsorbents and bioreactors.

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