ABSTRACT OF THE DISCLOSURE

[Task] To provide a platinum-loaded alumina catalyst with an improved catalyst life.

[Solution] A platinum-loaded alumina catalyst includes an alumina carrier, and platinum loaded on the alumina carrier, wherein the alumina carrier includes a γ-alumina carrier having a surface area of 200 m^2/g or more, a pore volume of 0.50 cm^3/g or more, an average pore diameter in a range of 60 to 150 Å, with pores having a pore diameter in a range of ± 30 Å from the average pore diameter occupying 60 % or more of a total pore volume, platinum particles are loaded on γ-alumina carrier in a range of 0.1 to 1.5 % by weight calculated as elemental platinum (Pt), and 70 % or more of the platinum particles have a size of 8 to 15 Å by direct observation using a transmission electron microscope.