

ABSTRACT

CATALYST COMPONENT FOR ADDITION POLYMERIZATION,
CATALYST FOR ADDITION POLYMERIZATION, AND PROCESS FOR
PRODUCING ADDITION POLYMER

A catalyst component for addition polymerization
containing (A) a compound containing an atom of the Group
II to the Group XII or Lanthanide in which the lowest
5 energy level of unoccupied molecular orbital having the
valence p-type atomic orbital of the atom of the Group
II to the Group XII or Lanthanide series as a main
component, wherein the coefficient represented by a
linear combination, is 0.4 or more) is calculated to be
10 0.008 atomic unit or less by the calculation of density
functional method, a catalyst for addition
polymerization obtained by contacting the same with a
specific metal compound, and a process for producing an
addition polymer with the catalyst.