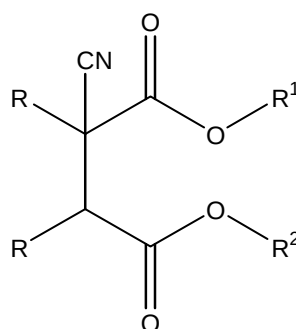


Abstract

Solid catalyst component and catalyst for olefin polymerization

Disclosed is a solid catalyst component for olefin polymerization. The catalyst component comprises a dialkoxo magnesium carrier, a titanium compound, and a product from an internal electron donor reacting in an inert solvent. Said internal electron donor compound comprises a 2,3-di-non-linear-alkyl-2-cyano succinic acid diester compound as presented in formula I:



(I)

as in formula I, R¹ and R² radicals are independently chosen from linear or branched C₁-C₄ alkyl groups; R is chosen from C₃-C₆ iso-alkyl, sec-alkyl, or cycloalkyl groups. Also disclosed is another solid catalyst component. The catalyst component comprises a dialkoxo magnesium carrier, a titanium compound, and a product from an internal electron donor reacting in an inert solvent. In addition to a 2,3-di-non-linear-alkyl-2-cyano succinic acid diester compound as presented in formula I, the internal electron donor compound can also comprise 2-isopropyl-2-(3-methylbutyl)-1,3-dimethoxy propane and/or a carboxylic ester compound. Also disclosed is a catalyst containing the solid catalyst component. The catalyst is used for olefin polymerization, particularly propylene polymerization, and is relatively active during polymerization. The obtained polymer has the advantages of wide molecular weight distribution, high molecular bulk density, good hydrogen regulation sensitivity, good stereospecificity, good particle shape, and small fine powder content.