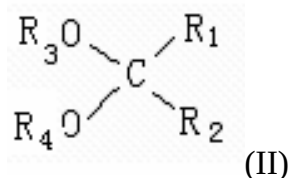


Magnesium Halide Complexes, Catalyst Components and Catalysts for Olefin Polymerization Prepared therefrom

Abstract

The invention provides a magnesium halide complex, having a composition represented by the formula (I): $\text{MgX}_2 \cdot m\text{ROH} \cdot n\text{E} \cdot p\text{H}_2\text{O}$ (I), wherein X is chloride, bromide, or a $\text{C}_1\text{-C}_{14}$ alkoxy or aryloxy; R is $\text{C}_1\text{-C}_{12}$ alkyl, $\text{C}_3\text{-C}_{10}$ cycloalkyl or $\text{C}_6\text{-C}_{10}$ aryl; E is a gem-dihydrocarbyloxy hydrocarbon represented by the formula (II):



wherein the R_1 and R_2 , which are identical or different, are hydrogen or $\text{C}_1\text{-C}_{10}$ linear or branched alkyl, $\text{C}_3\text{-C}_{10}$ cycloalkyl, $\text{C}_6\text{-C}_{10}$ aryl, $\text{C}_7\text{-C}_{10}$ alkylaryl or arylalkyl, said aryl, alkylaryl and arylalkyl being optionally substituted by one or more halogen atoms on aromatic ring; the R_1 and R_2 are optionally bonded to each other to form a ring or a fused ring system; the R_3 and R_4 have the same meanings as defined for the R_1 and R_2 other than hydrogen; m is in a range of from 1 to 5; n is in a range of from 0.005 to 1.0; and p is in a range of from 0 to 0.8. The invention further relates to a spherical catalyst component and a catalyst prepared from the spherical magnesium halide complex, and to use of the catalyst in the polymerization of α -olefin $\text{CH}_2=\text{CHR}$ or a mixture thereof, in which R is H, or alkyl or aryl having 1 to 12 carbon atoms.

Figure 1