Catalytic composition which may be used for the polymerization of alpha-olefins, comprising: (a) a solid catalyst comprising on titanium trichloride (TiCl3), (b) a non-halogen-containing cocatalyst comprising at least one non-halogen-containing organoaluminium compound, characterized in that the non-halogen-containing cocatalyst additionally contains at least one aminoalane containing no active hydrogen. Such a catalytic system may additionally contain a tertiary constituent chosen from oxygenated organosilicon compounds.

5605989

PROCESS FOR THE POLYMERISATION OF OLEFINS IN THE PRESENCE OF AN ACTIVATED CATALYST

Koch Benocir it Hannut, BELGIUM assigned to Solvay (Sociacu etacu e Anonyme)

A process for the polymerization of at least one olefin in the presence of an activated catalyst, includes (a) providing an activated catalyst by a method including (1) mixing, in the absence of a solvent, at least one chromium salt with a support composition comprised of at least one compound (A) which is an inorganic, oxygen containing compound of at least one element selected from the group consisting of Group IVb, IIIa and IVa, and at least one compound (B) which is an inorganic compound containing at least one element selected from the group consisting of Group IVb and IIIa, the at least one compound (B) being different from the at least one compound (A), to provide a mixture; (2) preactivating the mixture by heating for a period ranging from 0.5 to 18 hours without calcining in an oxidizing atmosphere to a temperature ranging from at least 30°C above room temperature to a temperature which is lower than the decomposition temperature of the at least one chromium salt and which is 5°C below the melting temperature of the at least one chromium salt to obtain a catalyst precursor; and (3) activating the catalyst precursor by calcining in an oxidizing atmosphere and under conditions such that part of the chromium is converted to hexavalent chromium; and (b) polymerizing the at least one olefin in the presence of the activated catalyst under conditions effective therefor.

5607655

OLEFIN POLYMERIZATION CATALYST AND PRECURSOR THEREFOR

Martin Joel L; Hawley Gil R Bartlesville, OK, UNITED STATES assigned to Phillips Petroleum Company

A generally dipyramidal-shaped catalyst precursor is prepared by dissolving magnesium dichloride and a suitable alcohol in a suitable solvent and then cooling to obtain a precipitate of the desired shape. The use of the precursor to prepare catalysts and the use of the catalysts to prepare polymers is also disclosed.

5608018

ALPHA-OLEFIN POLYMERIZATION CATALYST SYSTEM AND PROCESS FOR PRODUCING ALPHA-OLEFIN CATALYST

Ebara Takeshi; Kiyota Teruyosi; Imai Akio Ichihara, JAPAN assigned to Sumitomo Chemical Company Limited

An alpha-olefin polymerization catalyst system having so high a catalytic activity and stereoregularity that the catalyst residue and amorphous polymer need not be removed and a process for producing an alpha-olefin polymer using the catalyst system, said catalyst system