

ABSTRACT

OLEFIN POLYMERIZATION PROCESS, CATALYST SYSTEM, AND POLYMER

A catalyst system for the polymerization of alpha-olefins comprising a chromium-containing catalyst and an yttrium-containing catalyst wherein the yttrium-containing catalyst is represented by the formula $(Cp_2YX_x)_y \cdot M_z L_n$, wherein Cp is cyclopentadienyl or cyclopentadienyl substituted with an alkyl or alkyl silyl radical, X is a halogen, M is an alkali metal, L is a suitable electron donor ligand, x is 1 or 2, y is 1 or 2, z is 0 or 1, and n is a number corresponding to the value needed to form a stable complex, with the proviso that when y is 2, z and n are 0 is provided. Also disclosed is a polymerization process employing such a catalyst system, and novel olefin polymers. Polymers thus produced exhibit high bulk density and a broad molecular weight distribution.