

Title: Catalyst System and Process for Olefin Polymerization

ABSTRACT

5 The present application relates to a new catalyst system for the polymerization of olefins,
comprising a new ionic activator having the formula: $[R^1R^2R^3AH]^+ [Y]^-$, wherein $[Y]^-$ is a non-
coordinating anion (NCA), A is nitrogen or phosphorus, R^1 and R^2 are hydrocarbyl groups or
heteroatom-containing hydrocarbyl groups and together form a first, 3- to 10-membered non-
aromatic ring with A, wherein any number of adjacent ring members may optionally be members
10 of at least one second, aromatic or aliphatic ring or aliphatic and/or aromatic ring system of two
or more rings, wherein said at least one second ring or ring system is fused to said first ring, and
wherein any atom of the first and/or at least one second ring or ring system is a carbon atom or a
heteroatom and may be substituted independently by one or more substituents selected from the
group consisting of a hydrogen atom, halogen atom, C_1 to C_{10} alkyl, C_5 to C_{15} aryl, C_6 to C_{25}
15 arylalkyl, and C_6 to C_{25} alkylaryl, and R^3 is a hydrogen atom or C_1 to C_{10} alkyl, or R^3 is a C_1 to
 C_{10} alkylene group that connects to said first ring and/or to said at least one second ring or ring
system. The present application also relates to a process for the polymerization of olefins,
preferably propylene, using this and other catalyst systems, as well as to polymers made by said
process.

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(Figure 1)