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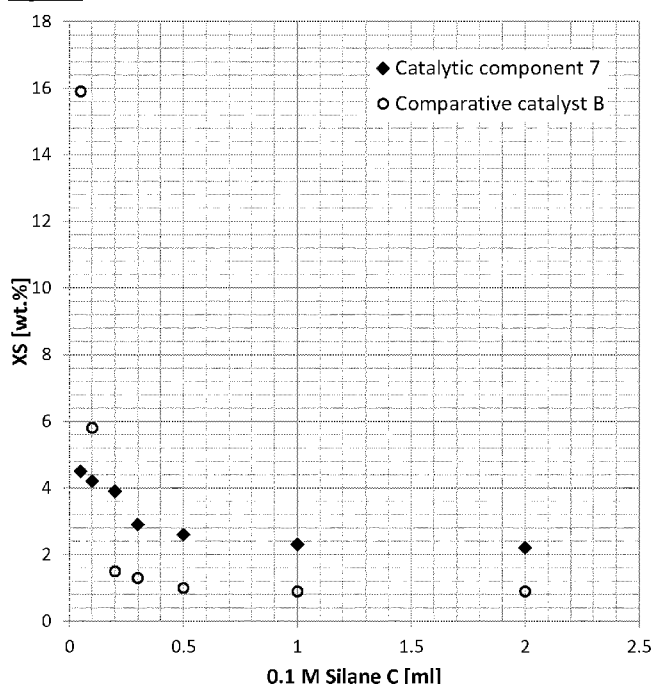
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(54) Title: HIGH PERFORMANCE ZIEGLER-NATTA CATALYST SYSTEMS, PROCESSES FOR PRODUCING SUCH CATALYST SYSTEMS, AND USE THEREOF

Figure 2



(57) Abstract: A catalyst system for the polymerization of olefins may include a first solid catalytic component and a second solid catalytic component. The first solid catalytic component may include: a spherical MgCl_2 -xROH support; a group 4-8 transition metal; and a diether internal electron donor. The second solid catalytic component may include: a spherical MgCl_2 -xROH support; a group 4-8 transition metal; and a diether internal electron donor. The first solid catalytic component produces a propylene homopolymer having a Xylene Solubles (XS) value of greater than 2 wt%; and the second solid catalytic component produces a propylene homopolymer having a XS value of less than 2 wt%. The second catalytic component may act as an external electron donor during use, and embodiments herein do not require use of any additional external electron donors to control polymerization and reliably vary the properties of the resulting polymer.



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