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Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

[Continued on next page]

(54) Title: HIGH VINYL TERMINATED PROPYLENE BASED OLIGOMERS

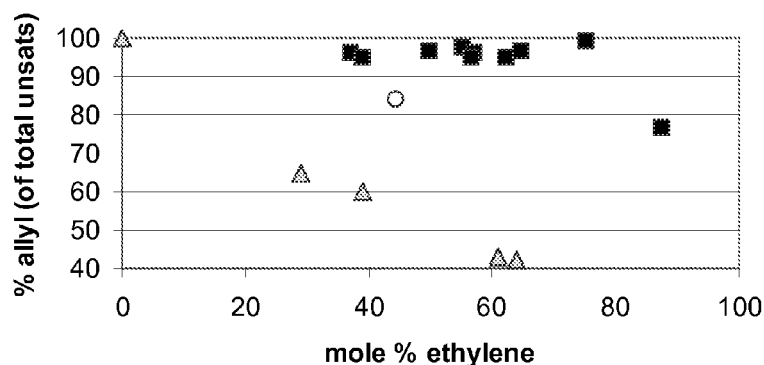


FIGURE 1

(57) Abstract: This invention relates to a co-oligomer having an Mn of 300 to 30,000 g/mol comprising 10 to 90 mol% propylene and 10 to 90 mol% of ethylene, wherein the oligomer has at least X% allyl chain ends, where: 1) X = $(-0.94 (\text{mole\% ethylene incorporated}) + 100)$, when 10 to 60 mole% ethylene is present in the co-oligomer, and 2) X = 45, when greater than 60 and less than 70 mole% ethylene is present in the co-oligomer, and 3) X = $(1.83 * (\text{mole\% ethylene incorporated}) - 83)$, when 70 to 90 mole % ethylene is present in the co-oligomer. This invention also relates to a homo-oligomer, comprising propylene, wherein the oligomer has: at least 93% allyl chain ends, an Mn of about 500 to about 20,000 g/mol, an isobutyl chain end to allylic vinyl group ratio of 0.8:1 to 1.2:1.0, and less than 100 ppm aluminum. This invention also relates to a process of making homo-oligomer, comprising propylene, wherein the productivity is greater than 4500 g/mmol Hf (or Zr)/hour.



— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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