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(71) Applicants (for all designated States except US): **DOW GLOBAL TECHNOLOGIES LLC** [US/US]; P.O. Box 1967, 2040 Dow Center, Midland, MI 48674 (US). **DOW BRAZIL S.A.** [BR/BR]; Avenida das Nacoes Unidas, 14171, Santo Amaro, Cep. 04794-000 Sao Paulo - Sp (BR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **POLLARD, Maria** [US/US]; 3707 Clarestone Drive, Pearland, TX 77584 (US). **TURNER, Michael** [US/US]; 8607 Doves Yard, Missouri City, TX 77459 (US). **MAZZOLA, Nicolas** [BR/BR]; Rua Aurora Germano de Lemos 333 Ap94,

13209460 Jundiai (BR). **GOMES, Jorge** [BR/BR]; Rua Gil Eanes 315 AP73, 04601040 Sao Paulo (BR).

(74) Agent: **HOPPE, James**; Dow Global Technologies LLC, 2040 Dow Center, Midland, Michigan 48674 (US).

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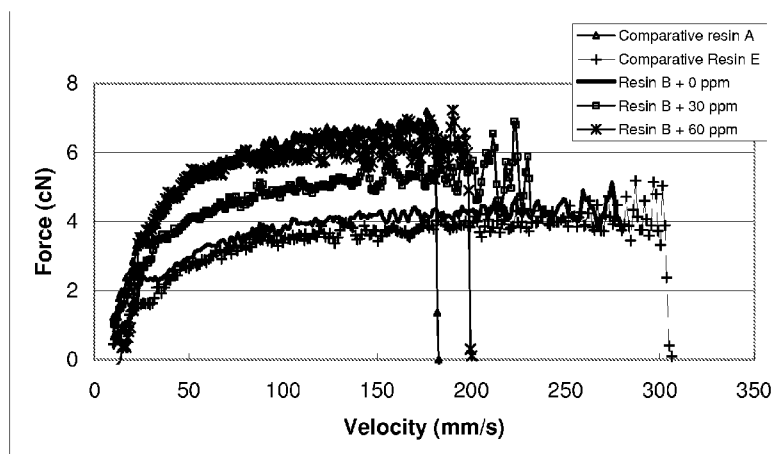
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(54) Title: METHOD FOR PREPARING POLYETHYLENE WITH HIGH MELT STRENGTH

FIGURE 1



(57) Abstract: The present invention is an ethylene-based polymer comprising reacting a polyethylene resin with an alkoxy amine derivative corresponding to the formula: $(R_1)(R_2)N-O-R_3$, where R_1 and R_2 are each independently of one another, hydrogen, C_4 - C_{42} alkyl or C_4 - C_{42} aryl or substituted hydrocarbon groups comprising O and/or N, and where R_1 and R_2 may form a ring structure together; and where R_3 is hydrogen, a hydrocarbon or a substituted hydrocarbon group comprising O and/or N. Preferred groups for R_3 include $-C_1$ - C_{19} alkyl; $-C_6$ - C_{10} aryl; $-C_2$ - C_{19} akenyl; $-O-C_1$ - C_{19} alkyl; $-O-C_6$ - C_{10} aryl; $-NH-C_1$ - C_{19} alkyl; $-NH-C_6$ - C_{10} aryl; $-N-(C_1-C_{19}alkyl)_2$. R_3 most preferably contains an acyl group. The resulting resin has increased melt strength with higher ratio of elongational viscosities at 0.1 to 100 rad/s when compared to substantially similar polyethylene resins which have not been reacted with an alkoxy amine derivative.



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