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(54) Title: LONG-CHAIN BRANCHED ETHYLENE-BASED POLYMERS

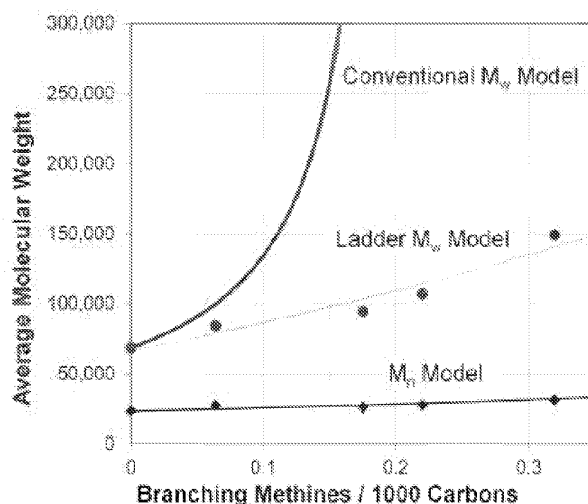


FIG. 1

(57) **Abstract:** Embodiments of this disclosure are directed to ethylene-based polymers. The ethylene-based polymers are polymerized units derived from ethylene, diene, and optionally one or more C₃-C₁₂ α -olefins. The ethylene-based polymer includes a melt strength greater than negative 17 times the log base 10 of the melt index plus 25 ($MS > -17 * \log(MI) + 25$). In the equation, MS is the melt strength in cN and MI is the melt index in g/10min according to ASTM D1238. The ethylene-based polymer also includes an average g' that is greater than 0.70. The average g' is an intrinsic viscosity ratio determined by gel permeation chromatography using a triple detector.

[Continued on next page]

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