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(54) Title: ETHYLENE/ α -OLEFIN BLOCK INTERPOLYMERS

(57) Abstract: Embodiments of the invention provide a class of mesophase separated ethylene/ α -olefin block interpolymers with controlled block sequences. The ethylene/ α -olefin interpolymers are characterized by an average block index, ABI, which is greater than zero and up to about 1.0 and a molecular weight distribution, M_w/M_n , greater than about 1.4. Preferably, the block index is from about 0.2 to about 1. In addition or alternatively, the block ethylene/ α -olefin interpolymers are characterized by having at least one fraction obtained by Temperature Rising Elution Fractionation ("TREF"), wherein the fraction has a block index greater than about 0.3 and up to about 1.0 and the ethylene/ α -olefin interpolymers have a molecular weight distribution, M_w/M_n , greater than about 1.4.

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