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(54) Title: HETEROGENEOUS ETHYLENE ALPHAOLEFIN INTERPOLYMER

(57) Abstract: An interpolymer of ethylene and at least one alpha-olefin is claimed, wherein the ethylene interpolymer is characterized as having an average  $M_v$  and a valley temperature between the interpolymer and high crystalline fraction,  $T_{hc}$ , such that the average  $M_v$  for a fraction above  $T_{hc}$  from ATREF divided by average  $M_v$  of the whole polymer from ATREF ( $M_{hc}/M_p$ ) is less than about 1.95 and wherein the interpolymer has a CDBI of less than 60%. The interpolymer of ethylene and at least one alpha-olefin can also be characterized as having a high density (HD) fraction and an overall density such that % HD fraction  $< -2733.3 + 2988.7x + 144111.5(x - 0.92325)^2$  where  $x$  is the density in grams/cubic centimeter. Fabricated articles comprising the novel interpolymers are also disclosed.



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