



(51) International Patent Classification:

**C08L 23/06** (2006.01)      **C08F 210/02** (2006.01)  
**C08L 23/08** (2006.01)      **C08J 5/18** (2006.01)

(21) International Application Number:

PCT/US2010/029214

(22) International Filing Date:

30 March 2010 (30.03.2010)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/165,065      31 March 2009 (31.03.2009)      US

(71) Applicant (for all designated States except US): **DOW GLOBAL TECHNOLOGIES INC.** [US/US]; 2040 Dow Center, Midland, MI 48674 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BAFNA, Ayush** [IN/US]; 3623 Skyline Dr., Manvel, TX 77578 (US). **DEMIRORS, Mehmet** [NL/US]; 2319 Bending Spring Drive, Pearland, TX 77584 (US). **DESJARDINS, Sylvie** [CA/US]; 430 Walnut Street, Lake Jackson, TX 77566 (US). **GINGER, Douglas** [US/US]; 1302 Arthur St., Houston, TX 77019 (US). **TICE, Colleen** [US/US]; Unit G, 2022 W. Main Street, Houston, TX 77098 (US). **PEARCE, Terry** [US/US]; 219 Wedgewood St, Lake Jackson, TX 77566 (US).

(74) Agent: **KRUPP, Stephen**; 2030 Dow Center, Midland, MI 48674 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report (Rule 48.2(g))

(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.



WO 2010/117792 A2