

(51) International Patent Classification:  
C08J 5/18 (2006.01)

(21) International Application Number:

PCT/US2014/063857

(22) International Filing Date:

4 November 2014 (04.11.2014)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

14/072,819 6 November 2013 (06.11.2013) US

(71) Applicant: CHEVRON PHILLIPS CHEMICAL COMPANY LP [US/US]; 10001 Six Pines Drive, The Woodlands, Texas 77380 (US).

(72) Inventors: SUKHADIA, Ashish M; 2550 SE Regency Road, Bartlesville, Oklahoma 74006 (US). MCDANIEL, Max P; 1601 Melmart Drive, Bartlesville, Oklahoma 74006 (US). DING, Errun; 5906 Woodland Road, Bartlesville, Oklahoma 74006 (US). ST JEAN, Guylaine; 2557 Georgetown Drive, Bartlesville, Oklahoma 74006 (US). YANG, Qing; 2917 Montrose Drive, Bartlesville, Oklahoma 74006 (US). HERT, Daniel G.; 8185 N 72nd E Avenue, Owasso, Oklahoma 74055 (US). TSO, Chung Ching; 5641 Chestnut Hill, Bartlesville, Oklahoma 74006 (US).

(74) Agent: HUSEMAN, Cheryl L; Chevron Phillips Chemical Company LP, 10001 Six Pines Drive, The Woodlands, Texas 77380 (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, BN, 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, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, 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.

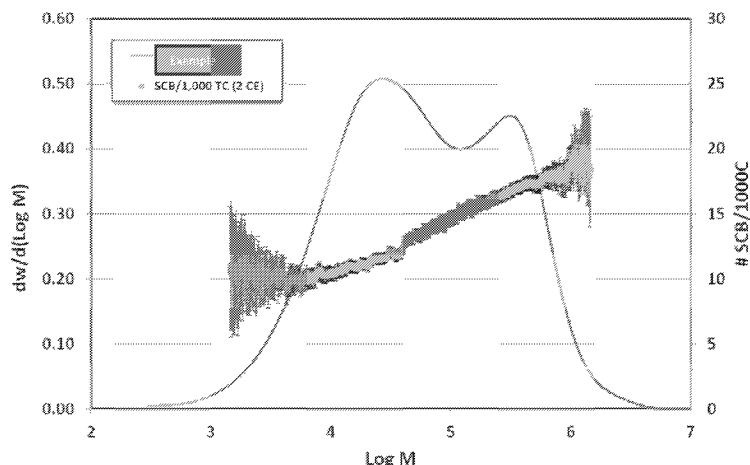
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, 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: LOW DENSITY POLYOLEFIN RESINS WITH LOW MOLECULAR WEIGHT AND HIGH MOLECULAR WEIGHT COMPONENTS, AND FILMS MADE THEREFROM

FIG. 1



(57) Abstract: Disclosed herein are ethylene-based polymers produced using dual metallocene catalyst systems. These polymers have low densities, high molecular weights, and broad molecular weight distributions, as well as having the majority of the long chain branches in the lower molecular weight component of the polymer, and the majority of the short chain branches in the higher molecular weight component of the polymer. Films produced from these polymers have improved impact and puncture resistance.