

(51) International Patent Classification:

B29C 47/68 (2006.01) C08K 5/00 (2006.01)
 B29C 47/80 (2006.01) C08L 23/02 (2006.01)
 C08J 3/20 (2006.01) C08L 23/10 (2006.01)

(21) International Application Number:

PCT/US2015/037616

(22) International Filing Date:

25 June 2015 (25.06.2015)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/016,722 25 June 2014 (25.06.2014) US

(71) Applicants: **EXXONMOBIL CHEMICAL PATENTS INC.** [US/US]; 5200 Bayway Drive, Baytown, TX 77520 (US). **BASF SE** [DE/DE]; Carl-Bosch-Str. 38, 67056 Ludwigshafen (DE).

(72) Inventors: **PEHLERT, George, J.**; 1338 Allston Street, Houston, TX 77008 (US). **ZHAO, Mosha, H.**; 5353 Institute Lane, Unit #14, Houston, TX 77005 (US). **ROSWELL, E., King**; 700 Bear Ridge Road, Pleasantville, NY 10570 (US).

(74) Agents: **FAULKNER, Kevin M.** et al.; ExxonMobil Chemical Company, P.O. Box 2149, Baytown, TX 77522-2149 (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).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

Published:

- with international search report (Art. 21(3))

(54) Title: HIGH MELT STRENGTH POLYPROPYLENE AND EXTRUSION PROCESS FOR PRESERVING MELT STRENGTH

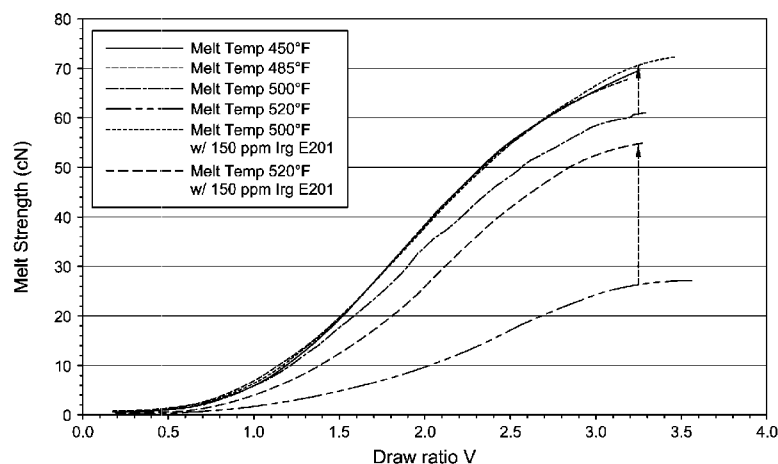


FIG. 1

(57) Abstract: A method of melt blending a polypropylene and the melt blended polypropylene therefrom, comprising providing a base-polypropylene having a MFR of less than 15 g/10 min and a molecular weight distribution (Mw/Mn) within the range from 5 to 16, and comprising hindered phenol and phosphorous-type antioxidants, and within the range from 5 ppm to 4000 ppm of an alkyl radical scavenger relative to the total weight of the components to form a melt blended polypropylene; melt blending the melt blended polypropylene at a temperature of at least 210°C; and isolating a melt blended, melt blended polypropylene.