

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
15 March 2018 (15.03.2018)



(10) International Publication Number
WO 2018/049300 A1

(51) International Patent Classification:
C08L 23/12 (2006.01) *C08L 23/14* (2006.01)

(21) International Application Number:
PCT/US2017/050896

(22) International Filing Date:
11 September 2017 (11.09.2017)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
62/393,472 12 September 2016 (12.09.2016) US

(71) Applicant: **DOW GLOBAL TECHNOLOGIES LLC**
[US/US]; 2040 Dow Center, Midland, MI 48674 (US).

(72) Inventors: **LI PI SHAN, Colin**; 2301 N. Brazosport Blvd., Freeport, TX 77541 (US). **LEE, Jihean**; 2301 N. Brazosport Blvd., Freeport, TX 77541 (US). **LAAKSO, Raymond**; 2301 N. Brazosport Blvd., Freeport, TX 77541 (US). **GARCIA-MEITIN, Eddy I.**; 2301 N. Brazosport Blvd., Freeport, TX 77541 (US). **HU, Yushan**; 230 Abner Jackson Parkway, Lake Jackson, TX 77566 (US).

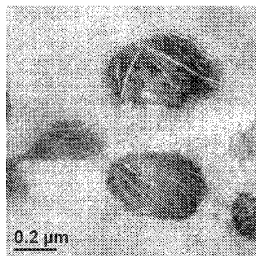
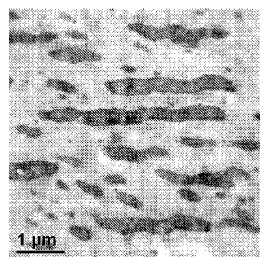
(74) Agent: **HUANG, Cheney**; The The Dow Chemical Company, Intellectual Property, P. O. Box 1967, Midland, Michigan 48641-1967 (US).

(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, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, 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).

(54) Title: IMPACT MODIFIED COMPOSITIONS FOR LOW TEMPERATURE USE CONTAINERS

FIG. 1



Comparative Example C

(57) Abstract: Embodiments relate to compositions comprising: (a) from 60 wt% to 90 wt% of a propylene polymer base that has a melt flow rate from 2 g/10 min to 100 g/10 min according to ASTM D1238 (230 °C/2.16 kg); (b) from 2 wt% to 39.5 wt% of an olefin block copolymer; and (c) from 0.5 wt% to 20 wt% of a composite component comprising a crystalline block composite or a block composite. In certain embodiments, the composition may further comprise: (d) from 1 wt% to 30 wt% a polyolefin copolymer, the polyolefin copolymer being derived from ethylene and at least one of a C3 to C10 alpha-olefin, having a melt index from 100 g/10 min to 2000 g/10 min according to ASTM D1238 (190 °C/2.16 kg), and having a density from 0.860 g/cc to 0.900 g/cc. In further embodiments, the composition may further comprise: (e) from 0.1 wt% to 5 wt% of an antioxidant.

WO 2018/049300 A1

[Continued on next page]

Published:

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