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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
30 November 2000 (30.11.2000)

PCT

(10) International Publication Number
WO 00/71338 A1

(51) International Patent Classification[7]: B32B 27/32, C08J 5/18, C08L 23/10, C08K 5/1575

(21) International Application Number: PCT/IB00/00423

(22) International Filing Date: 6 April 2000 (06.04.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/315,098 19 May 1999 (19.05.1999) US
09/454,869 3 December 1999 (03.12.1999) US

(71) Applicant: MONTELL TECHNOLOGY COMPANY BV [NL/NL]; Hoeksteen 66, NL-2132 MS Hoofddorp (NL).

(72) Inventors: SHAH, Bakhtiar, Alam; 36 Long Drive, Elkton, MD 21921 (US). ROSENTHAL, Jay, S.; 193 South Benjamin Drive, West Chester, PA 19382 (US).

(81) Designated States *(national)*: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:
— *With international search report.*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 00/71338 A1

(54) Title: HIGH SURFACE GLOSS, CO-EXTRUDED SHEETS FROM OLEFIN POLYMER MATERIALS

(57) Abstract: A co-extruded sheet made from olefin polymer materials includes (1) at least one outer layer of (a) a propylene polymer having a melt flow rate of 0.5-15 dg/min, or a graft copolymer comprising a backbone of a propylene polymer material, to which is graft polymerized a vinyl monomer, and (b) a nucleating agent having a melting point greater than 265 °C and (2) another layer made from (a) about 5 % to about 50 % of a high melt strength propylene homopolymer or copolymer, and/or about 5 % to about 40 % of chopped glass fibers, (b) optionally about 5 % to about 40 % of an inorganic filler, (c) about 2 % to about 50 % of an olefin polymer composition, and (d) optionally about 5 % to about 70 % of one or more other olefin polymer materials. When the second layer is reinforced with glass fibers, the stiffness of the sheet is increased while maintaining impact strength. The sheet has high surface gloss and good chemical resistance, and can be thermoformed using a melt phase thermoforming process wherein the surface temperature of the nucleated propylene polymer layer is from at least 310 °F.