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| <b>(51) International Patent Classification <sup>6</sup>:</b><br>C08L 25/06, 51/04, C08J 5/18, B29C 51/00, B32B 27/30 // (C08L 25/06, 51:04, 51:04)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>A1</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>(11) International Publication Number:</b> WO 99/23157<br><b>(43) International Publication Date:</b> 14 May 1999 (14.05.99) |
| <b>(21) International Application Number:</b> PCT/US98/18667<br><b>(22) International Filing Date:</b> 4 September 1998 (04.09.98)<br><b>(30) Priority Data:</b><br>60/063,851 31 October 1997 (31.10.97) US<br>60/087,088 28 May 1998 (28.05.98) US<br><b>(71) Applicant:</b> THE DOW CHEMICAL COMPANY [US/US];<br>2030 Dow Center, Midland, MI 48674 (US).<br><b>(72) Inventors:</b> SALMANG, Roldolfo, J.; Apartment 701, Carrera<br>6 No. 80A-27, Santa Fe de Bogota (CO). SUGDEN, John,<br>L.; 1500 Avalon Street, Midland, MI 48642 (US).<br><b>(74) Agent:</b> ZETTLER, Lynn, M.; Patent Dept., P.O. Box 1967,<br>Midland, MI 48641-1967 (US).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>(81) Designated States:</b> AL, AM, AT, AU, AZ, BA, BB, BG, BR,<br>BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE,<br>GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ,<br>LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW,<br>MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ,<br>TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent<br>(GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent<br>(AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent<br>(AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT,<br>LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI,<br>CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).<br><br><b>Published</b><br><i>With international search report.</i> |                                                                                                                                 |
| <b>(54) Title:</b> RUBBER MODIFIED MONOVINYLLIDENE AROMATIC POLYMER BLENDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                 |
| <b>(57) Abstract</b><br><p>The present invention is a blend of a monovinylidene aromatic polymer and a rubber modified monovinylidene aromatic polymer, which can be used to produce cost effective, transparent packaging that can be used in food packaging and non-food packaging markets, and can be produced using conventional thermoforming equipment. The blend comprises: a) from 50 to 88 wt. percent based on the total weight of the blend, of a monovinylidene aromatic polymer having a weight average molecular weight (Mw) of from 265,000 to 400,000 and a melt flow of less than 2.5 g/10 min.; and b) from 12 to 50 wt. percent based on the total weight of the blend, of a rubber modified monovinylidene aromatic polymer comprising a monovinylidene aromatic polymer matrix having rubber particles dispersed therein, wherein the rubber particles comprise, based on the total weight of the rubber particles, from 25 to 100 weight percent rubber particles having a capsule morphology and a volume average particle size of from 0.1 to 0.4 microns; and from 75 to 0 weight percent rubber particles having an entanglement morphology having a volume average particle size of from 0.25 to 1 micron.</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                 |