

PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : C08L 23/16, 23/04, 23/08		A1	(11) International Publication Number: WO 97/26297
			(43) International Publication Date: 24 July 1997 (24.07.97)
(21) International Application Number: PCT/US97/01180		TX 77545 (US). MARKOVICH, Ronald, P. [US/US]; 18800 Egret Boulevard, No. 711, Houston, TX 77058 (US).	
(22) International Filing Date: 22 January 1997 (22.01.97)		(74) Agent: LELKES, Robert, S.; Whyte Hirschboeck Dudek S.C., Suite 2100, 111 East Wisconsin Avenue, Milwaukee, WI 53202 (US).	
(30) Priority Data: 60/010,303 22 January 1996 (22.01.96) US 60/013,430 14 March 1996 (14.03.96) US		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, ARIPO patent (KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).	
(71) Applicant (for all designated States except US): THE DOW CHEMICAL COMPANY [US/US]; 2030 Dow Center, Midland, MI 48674 (US).		Published With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.	
(72) Inventors; and (75) Inventors/Applicants (for US only): PARIKH, Deepak, R. [US/US]; 59 North Trillium Court, Lake Jackson, TX 77566 (US). CHUM, Pak-Wing, S. [US/US]; 126 Juniper Street, Lake Jackson, TX 77566 (US). JAIN, Pradeep [US/US]; 308 Banyan, Lake Jackson, TX 77566 (US). PATEL, Rajen, M. [US/US]; 114 Scarlet Oak, Lake Jackson, TX 77566 (US). CLAYFIELD, Timothy, E. [CH/CH]; 12, route de Valleiry, CH-1284 Chancy (CH). MCKEAND, Thomas, J., Jr. [US/US]; 401 South Brazosport Boulevard, No. 242, Freeport, TX 77541 (US). KUMMER, Kyle, G. [US/US]; 226 Plum Circle, Lake Jackson, TX 77566 (US). KHAN, Wasif, Ahmed [CA/US]; 1715 Blue Heather Lane, Fresno,			
(54) Title: POLYOLEFIN ELASTOMER BLENDS EXHIBITING IMPROVED PROPERTIES			
The graph plots Probe Penetration (mm) on the y-axis (0 to 0.2) against Temperature (°C) on the x-axis (25 to 100). Four curves are shown: SLEP I, IN (topmost, highest penetration), Blend A, IN (second from top), SLEP I, 10N (third from top), and Blend A, 10N (bottommost, lowest penetration). All curves show a sharp increase in penetration starting around 60°C, with SLEP I, IN reaching the highest penetration of approximately 0.18 mm at 100°C.			
(57) Abstract			
Polymer mixtures are disclosed which comprise at least one homogeneously branched ethylene polymer (A) and at least one ethylene polymer (B) having a crystallinity which is at least 7 percent greater than the crystallinity of polymer (A) with certain provisos. A process for making a molded article using the disclosed polymer mixtures is disclosed as well as films, film layers, coatings and molded articles formed from those mixtures. These mixtures have several advantages over polymer compositions of the prior art, including improved properties at elevated temperatures such as improved softening point under load, improved hardness, improved toughness, improved 100 percent modulus of elasticity, improved compression set, improved ability to prevent oil bleed out at lower temperatures when the mixture contains oil and reduced injection molding cycle time. The mixtures retain their performance advantages even when substantial amounts of additives such as oil and filler are incorporated into the mixture. The mixtures may also be cross-linked after they are formed into the shape of an article to form vulcanized elastomeric products. The polymer mixtures have utility in a variety of applications.			