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200001069-4

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶: C08G 18/48, 18/76, C09J 175/08, 175/04, C09D 175/08, C08G 18/66	A1	(11) International Publication Number: WO 99/16808 (43) International Publication Date: 8 April 1999 (08.04.99)
(21) International Application Number: PCT/US98/19589 (22) International Filing Date: 18 September 1998 (18.09.98) (30) Priority Data: 60/059,948 26 September 1997 (26.09.97) US (71) Applicant: THE DOW CHEMICAL COMPANY [US/US]; 2030 Dow Center, Midland, MI 48674 (US). (72) Inventors: ROSER, Jean-Luc; 7, rue des Rosiers, F-74160 St. Julien en Genevois (FR). SOOD, Rajinder, L.; Chemin du Treizou, CH-1270 Trelex (CH). STORIONE, Antonio; Chemin du Petit Bois, Chatelaine, CH-1219 Geneva (CH). (74) Agent: SIMS, Norman, L.; Patent Dept., P.O. Box 1967, Midland, MI 48641-1967 (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, GH, GM, HR, HU, ID, 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, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, 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 <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>
(54) Title: HIGH SERVICE TEMPERATURE POLYURETHANE ELASTOMERS (57) Abstract The invention is polyurethane compositions useful in high temperature service environments comprising: (A) i) one or more polyols having hydroxyl functionality of 3.0 or greater and a weight average molecular weight of 2000 to 6000 wherein the polyols are the reaction product of an initiator or mixture of initiators having an average functionality of 4 or greater and one or more alkylene oxides; or ii) a) one or more polyols having hydroxyl functionality of 3.0 or greater and weight average molecular weight of greater than 6000 wherein the polyols are the reaction product of an initiator or mixture of initiators having an average functionality of 4 or greater and one or more alkylene oxides, and b) one or more cross-linkers having an equivalent weight of 200 or less; (B) an organic isocyanate; and (C) a catalyst for the reaction of an isocyanate with an active hydrogen containing compound; wherein the ratio of isocyanate moieties to active hydrogen containing moieties is from 0.9:1.0 to 1.5:1.0. The compositions of the invention can be processed at relatively low temperatures to form high heat service temperature compositions useful as adhesives, sealants, encapsulants, gaskets or elastomers. Such formulations have relatively low viscosities at low and ambient temperatures. Further, the cured compositions of the invention demonstrate the ability to withstand temperatures of 140 °C or greater and more preferably 155 °C or greater without significant deterioration in properties.		