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(21) International Application Number: PCT/US00/12732 (22) International Filing Date: 10 May 2000 (10.05.00) (30) Priority Data: 60/134,012 10 May 1999 (10.05.99) US (71) Applicant: 3M INNOVATIVE PROPERTIES COMPANY [US/US]; 3M Center, P.O. Box 33427, Saint Paul, MN 55133-3427 (US). (72) Inventors: GROSS, Kathleen, B.; P.O. Box 33427, Saint Paul, MN 55133-3427 (US). SCHULTZ, William, J.; P.O. Box 33427, Saint Paul, MN 55133-3427 (US). (74) Agents: BARDELL, Scott, A. et al.; Office of Intellectual Prop- erty Counsel, P.O. Box 33427, Saint Paul, MN 55133-3427 (US).		(81) Designated States: AE, AG, AL, AM, AT, AT (Utility model), AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, CZ (Utility model), DE, DE (Utility model), DK, DK (Utility model), DM, DZ, EE, EE (Utility model), ES, FI, FI (Utility model), GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KR (Utility model), 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, SK (Utility model), SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, 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 <i>With international search report.</i>
(54) Title: COMPOSITIONS FOR MAKING ENE-THIOL ELASTOMERS (57) Abstract In one aspect, the invention provides ene-thiol elastomers comprising the reaction product of a polythiol free of hydrophilic groups and having at least two thiol groups and an aromatic, heterocyclic, aliphatic, or cycloaliphatic polyene having at least two reactive unsaturated carbon to carbon bonds. In another aspect, the invention provides ene-thiol elastomer comprising the reaction product of (a) a thiol terminated oligomer comprising the reaction product of a polythiol having two thiol groups and a first polyene or mixture of polyenes having two reactive unsaturated carbon to carbon bonds; and (b) a second polyene or a mixture of polyenes having at least 5 percent functional equivalents of unsaturated carbon to carbon bonds from polyenes having at least three unsaturated carbon to carbon bonds. The ene-thiol elastomers of the invention have a weight increase of not more than 4 weight percent in 15 days at a temperature of 22 °C when immersed in a solution of 96 parts by weight water and 4 parts by weight n-butanol and/or a water vapor transmission rate of less than 50 g-mm/m²-day at 40 °C according to ASTM D814.		