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| (51) International Patent Classification <sup>6</sup> :<br>C08F 18/24                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | A1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | (11) International Publication Number: WO 99/33888<br>(43) International Publication Date: 8 July 1999 (08.07.99) |
| (21) International Application Number: PCT/US98/27124<br>(22) International Filing Date: 16 December 1998 (16.12.98)<br>(30) Priority Data:<br>09/000,660                      30 December 1997 (30.12.97)      US<br>(71) Applicant: PPG INDUSTRIES OHIO, INC. [US/US]; 3800<br>West 143rd Street, Cleveland, OH 44111 (US).<br>(72) Inventor: HEROLD, Robert, D.; 218 Leaside Drive, Mon-<br>roeville, PA 15146 (US).<br>(74) Agents: MORRIS, George, D.; PPG Industries, Inc., One PPG<br>Place, Pittsburgh, PA 15272 (US) et al.                                                                                                                                                                                                                                                                                                                                                                                                               | (81) Designated States: 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, IN, IS, JP, KE, KG, KP, KR,<br>KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN,<br>MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK,<br>SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO<br>patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian<br>patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European<br>patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR,<br>IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF,<br>CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).<br><br>Published<br><i>With international search report.</i><br><i>Before the expiration of the time limit for amending the</i><br><i>claims and to be republished in the event of the receipt of</i><br><i>amendments.</i> |                                                                                                                   |
| (54) Title: PROCESS FOR FORMING POLY(ALLYL CARBONATE)-FUNCTIONAL PREPOLYMER COMPOSITION<br><br>(57) Abstract<br><br>A process for forming a polymerizable, liquid, substantially gel-free, poly(allyl carbonate)-functional prepolymer composition comprises heating a neat composition comprising at least one poly(allyl carbonate)-functional monomer and free radical initiator having a ten-hour half-life temperature of at least 85 °C at temperatures in the range of from 5 Celsius degrees below the ten-hour half-life temperature of the free radical initiator to 150 °C, to form a reaction mixture having an increased 25 °C viscosity in the range of from 25 to 10,000 centipoises and an ethylenic double bond utilization of at least 3 percent; and over a period of less than 90 minutes cooling the reaction mixture to a temperature at least 20 Celsius degrees below the ten-hour half-life temperature of the initiator. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                   |