

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
18 October 2001 (18.10.2001)

PCT

(10) International Publication Number
WO 01/77194 A3

(51) International Patent Classification⁷: **C08F 18/24**,
218/18, 290/06, G02B 1/04

(21) International Application Number: PCT/US01/10081

(22) International Filing Date: 29 March 2001 (29.03.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/546,267 10 April 2000 (10.04.2000) US
09/630,074 1 August 2000 (01.08.2000) US

(71) Applicant: PPG INDUSTRIES OHIO, INC. [US/US];
3800 West 143rd Street, Cleveland, OH 44111 (US).

(72) Inventors: DAUGHENBAUGH, Randy, E.; 108 Gardenia Drive, Turtle Creek, PA 15145 (US). HEROLD, Robert, D.; 218 Leaside Drive, Monroeville, PA 15146 (US).

(74) Agents: MARMO, Carol, A. et al.; PPG Industries, Inc., One PPG Place, Pittsburgh, PA 15272 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, 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, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:
— with international search report

(88) Date of publication of the international search report:
28 March 2002

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: POLYMERIZABLE COMPOSITION OF ALLYL FUNCTIONAL MONOMERS

(57) Abstract: Describes a polymerizable composition of (a) a first allyl functional monomer, which is selected such that a substantially completely cured polymerizate of the first allyl functional monomer has a 15 second Barcol 934 hardness of at least 40, and (b) a second allyl functional monomer selected from polyether diol bis(allyl carbonate), polylactone diol bis(allyl carbonate) and mixtures thereof. The second allyl functional monomer is present in the composition in an amount to provide a substantially completely cured polymerizate having: (i) improved organic photochromic substance incorporation relative to a substantially completely cured polymerizate of the composition free of monomer (b); and (ii) heat distortion temperature of at least 40 °C.



WO 01/77194 A3