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| <b>(51) International Patent Classification <sup>6</sup> :</b><br><b>C08L 61/10, 61/14, 83/06, C08G 77/16, 77/18, B32B 1/08, 27/42</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>A1</b> | <b>(11) International Publication Number:</b> <b>WO 96/33238</b><br><b>(43) International Publication Date:</b> 24 October 1996 (24.10.96)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>(21) International Application Number:</b> PCT/US96/05454<br><b>(22) International Filing Date:</b> 19 April 1996 (19.04.96)<br><b>(30) Priority Data:</b><br>08/426,245      21 April 1995 (21.04.95)      US<br><b>(60) Parent Application or Grant</b><br><b>(63) Related by Continuation</b><br>US      08/426,245 (CIP)<br>Filed on      21 April 1995 (21.04.95)<br><b>(71) Applicant (for all designated States except US):</b> AMERON INTERNATIONAL, INC. [US/US]; 245 South Los Robles Avenue, Pasadena, CA 91101 (US).<br><b>(72) Inventors; and</b><br><b>(75) Inventors/Applicants (for US only):</b> KANE, John, F. [US/US]; 23011 Canzonet Street, Woodland Hills, CA 91367 (US). MOWRER, Norman, R. [US/US]; 1570 Coachwood Street, La Habra, CA 90631 (US).<br><b>(74) Agent:</b> LANGTON, Grant, T.; Christie, Parker & Hale, Suite 500, 350 W. Colorado Boulevard, P.O. Box 7068, Pasadena, CA 91109-7068 (US). |           | <b>(81) Designated States:</b> AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, 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, AR, IP, 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).<br><br><b>Published</b><br><i>With international search report.</i><br><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> |
| <b>(54) Title:</b> PHENOLIC RESIN COMPOSITIONS WITH IMPROVED IMPACT RESISTANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>(57) Abstract</b><br><p>Phenolic siloxane composition are prepared by 1) combining phenol with an aldehyde and an alkoxy or silanol-functional silicone intermediate, 2) combining a phenolic novolac resin with a formaldehyde donor and an alkoxy or silanol-functional silicone intermediate or 3) combining a phenolic resole resin with an alkoxy or silanol-functional silicone intermediate. Catalysts to facilitate the formation of a phenolic resin, the condensation of the phenolic resin and the hydrolysis and/or condensation of the silicone intermediate can optionally be added. The resulting composition comprises an IPN of siloxane polymers and phenolic polymers and has flame, heat and chemical resistance equal to or exceeding conventional phenolic resins and improved impact resistance, tensile strength, flexural modulus and density.</p>                                                       |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |