

94906 J J 4.4

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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁵ : C08G 18/08, C08J 7/04	A1	(11) International Publication Number: WO 94/17116 (43) International Publication Date: 4 August 1994 (04.08.94)
(21) International Application Number: PCT/US94/00249 (22) International Filing Date: 7 January 1994 (07.01.94) (30) Priority Data: 08/006,633 21 January 1993 (21.01.93) US (71) Applicant: SDC COATINGS INC. [US/US]; 1911 Wright Circle, Anaheim, CA 92806 (US). (72) Inventors: FARBER, Bruce, M.; 12802 Burgess Avenue, La Mirada, CA 90638 (US). HARBISON, William, C.; 22231 Crystal Pond, Mission Viejo, CA 92692 (US). (74) Agent: WIEDEMANN, John, T.; Pretty, Schroeder, Brueggemann & Clark, 444 South Flower Street, Suite 2000, Los Angeles, CA 90071 (US).	(81) Designated States: AU, CA, CN, JP, KR, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report. 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: PROCESS FOR IMPROVING IMPACT RESISTANCE OF COATED PLASTIC SUBSTRATES

(57) Abstract

A process for improving the impact resistance of a coated plastic substrate, particularly those polymers having a high refractive index, comprising applying an aqueous polyurethane dispersion as a primer layer to at least one surface of the plastic substrate, at least partially curing the aqueous polyurethane dispersion by air drying at ambient temperature, applying a coating composition over the polyurethane primer layer, and curing the coating composition to form an abrasion resistant hard coat. Preferably, the aqueous polyurethane dispersion is air dried at ambient temperature for less than one hour before application of the abrasion resistant coating composition. The process provides an impact enhancing, abrasion resistant coating system having strong interfacial adhesion that is preferably transparent for application onto referably transparent plastic articles, such as ophthalmic lenses and safety eye wear.

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