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(54) **PROCESS FOR IMPROVING HYDROLYSIS RESISTANCE OF POLYURETHANE DISPERSION ADHESIVES AND BONDED ASSEMBLIES PRODUCED THEREFROM**

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(*) Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(52) **U.S. Cl.** ..... **428/424.4**; 428/424.2; 428/414; 428/217; 428/308.4; 36/30 R
(58) **Field of Search** ..... 428/217, 422.8, 428/414, 424.2, 424.4, 308.4, 318.4, 319.3; 36/30 R

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(57) **ABSTRACT**

A method of bonding two substrates at least one of which is a rubbery polymeric material having carbon-carbon double bonds on the polymer backbone, the method comprising:

a) applying an aqueous polyurethane dispersion adhesive composition to at least one of the substrates, the adhesive compostion further comprising an epoxy resin;

b) allowing the composition to dry; and then

c) joining the substrates with heating to activate the adhesive. The substrates are suitably footwear materials such as a molded rubber outer sole which has been first primed with a chlorinating primer, and a foam midsole of a material such as a lightly crosslinked ethylene vinyl acetate. The process results in bonded assemblies having improved humidity resistance.

15 Claims, No Drawings