

[54] **ADHESIVE BONDING TO TEETH OF
ORTHODONTIC BRACKETS AND THE LIKE**

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[56] **References Cited**

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[57] **ABSTRACT**

Orthodontic brackets and the like are adhesively secured to teeth by means of a self-curing thixotropic acrylic ester monomer composition wherein the mono-

mer has been made thixotropic through the inclusion of fumed silane treated silica and wherein the acrylic ester monomer or monomers have two or more active acrylic ester groups, the thixotropic compositions prior to curing having a viscosity of about 85,000 cps to 4,385,000 cps.

Prior to adhering the orthodontic bracket or other device to the tooth surface, the tooth surface is acid-etched, rinsed and dried. The thixotropic-activated monomer is then applied to the surface of the tooth or to the surface of the orthodontic bracket just prior to placing the bracket on the tooth. The thixotropic acrylic ester monomer is activated prior to application by blending substantially equal proportions of a thixotropic monomer composition containing acrylic ester monomer, fumed silica, and amine activator with a thixotropic monomer composition containing acrylic ester monomer, fumed silica, and peroxide catalyst.

The bracket is adhered to the tooth surface through means of the thixotropic monomer mix and left undisturbed while being kept relatively dry until the monomer has hardened. Arch-wires may then be applied to the orthodontic bracket.

8 Claims, No Drawings