

United States Patent [19]

DeLuca et al.

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[54] **CRYSTALLINE ALUMINA COMPOSITES**

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[52] U.S. Cl. **433/9**

[58] Field of Search **433/9, 220, 218**

[56] **References Cited**

U.S. PATENT DOCUMENTS

4,363,624	12/1982	Johnston	433/9
4,364,731	12/1982	Norling et al.	433/218
4,479,782	10/1984	Orlowski et al.	433/9
4,600,390	7/1986	Gobel et al.	433/218

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[57] **ABSTRACT**

The adhesion of crystalline alumina to adhesives is enhanced by coating the surface of the alumina that is to be in contact with the adhesive, with a very thin coating of a siliceous material such as sputter coated silica.

5 Claims, 15 Drawing Figures

