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United States Patent [19]

Shores

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[54] **MOISTURE GETTING COMPOSITION FOR HERMETIC MICROELECTRONIC DEVICES**

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Related U.S. Application Data

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[52] **U.S. Cl.** **252/194**; 501/32; 501/39; 501/80; 523/466; 524/444

[58] **Field of Search** 252/194; 106/122; 501/32, 39, 80; 523/466; 524/444

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[57] **ABSTRACT**

This invention describes a composition of matter having moisture gettering properties and applicable as coating or adhesive in a hermetic microelectronic device. The composition is applied to the interior surface of the packaging at a thickness of 0.1–25 mil and comprises a desiccant finely dispersed in a binder which is a water vapor permeable solid material. This may be a polymer, porous ceramic or glass. The desiccant is a particulate solid with 0.2–100 micrometer average particle size. It ought to be able to absorb from a one atmosphere pressure gas containing one volume percent water vapor at least four parts by weight of water vapor per 100 parts by weight of desiccant at 25° C., and for high reliability devices, it should also be able to absorb at least two parts by weight of water vapor per 100 parts by weight of desiccant at 100° C. The desiccant to binder volume ratio ought to be between 0.002 and 2. Molecular sieves are especially useful as the desiccant component of the composition of this invention.

7 Claims, No Drawings