

Abstract

An Al composite material collapsible in the presence of moisture is herein disclosed and it is characterized in that the external surface of small pieces or powder
5 constructed from a single or a plurality of crystalline grains of Al or an Al alloy is covered with a film of a low melting point metal or alloy selected from the group consisting of In, Sn, combinations of In and Sn, and alloys thereof. The content of the foregoing low melting point metal or alloy ranges from 0.1 to 20% by mass on the basis of the total mass of the composite material. A material obtained by adding a low
10 melting point metal in an amount specified above to, for instance, Al and then fusing and melting the resulting mixture is quenched and solidified within a non-oxidizing atmosphere to thus form an Al composite material. An Al film, an Al spray-coated film and Al powder can be prepared from the foregoing Al composite material. A component member for a film-forming chamber is also provided, which is provided
15 with a water-collapsible Al film on the surface thereof. Film-forming operations are continued over a long period of time using the component member for a film-forming chamber provided with the water-collapsible Al film and then film-forming materials can be recovered from the component member on which the film-forming materials are deposited in a substantial thickness.