

Abstract

Herein disclosed is alumina powder incorporated into a composition which should have excellent heat conduction and used as a heat-radiating member and for sealing a semiconductor. The spherical α -alumina powder has an average sphericity of not less than 0.93 and a content of α -crystalline form is not less than 95% and the spherical α -alumina powder is prepared according to the method, which comprises the steps of: (1) softening metallic aluminum powder or alumina powder through the treatment with a flame; (2) solidifying the softened powder by passing the same through a zone maintained at a temperature ranging from 800 to 500°C; (3) increasing the content of α -phase by passing the solidified powder through a zone maintained at a temperature ranging from 950 to 1,500°C; and (4) collecting the resulting powdery product while cooling the same.