

## **Properties of phenolic-based Ag-filled conductive adhesive affected by different coupling agents**

### **Abstract**

In this study, a phenolic-based Ag flake-filled electrically conductive adhesive (ECA) was investigated in terms of rheological, electrical, and mechanical properties. To clarify the effect of various Ag flake filler content and silane coupling agents on the characteristic of the ECA, rheological properties of the Ag flake-filled ECA paste, electrical resistivity, and shear strength of the cured ECA were investigated. Results showed that an increase of Ag flake content leads to an increase in both viscosity of the ECA paste and electrical conductivity of the as-cured ECA. Silane coupling agents-treated Ag flakes have a significant effect on the electrical resistivity and shear strength in the ECAs.

### **Keywords**

Conductive adhesives; Coupling agents; Electrical resistivity; Rheology; Shear strength