

## **Thermal, Electrical and Physical Properties of Recycled Copper Filled Epoxy Composites**

### **Abstract**

The effect of recycled copper filled epoxy composites on thermal, electrical and physical properties were investigated. The recycled copper was collected as a waste from the milling machine. The recycled copper filled epoxy composite was mixed using mechanical stirrer. The effect of volume fraction of recycled copper of the epoxy composites were studied based on the coefficient of thermal expansion (CTE), electrical conductivity hardness and density. Incorporation of recycled copper has decreased the CTE of the composites. The electrical conductivity, hardness and density of the composites increased with increasing of volume fraction and filler loading.

**Keywords:** Coefficient of Thermal Expansion (CTE), Density, Electrical Conductivity, Epoxy, Hardness, Recycled Copper