

## **Influence of Micro Fillers Content on the Mechanical Properties of Epoxy Composites**

**Authors :** H. Unal, A. Mimaroglu, I. Ozsoy

**Abstract :** In this study, the mechanical properties of micro filled epoxy composites were investigated. The matrix material is epoxy. Micro fillers are Al<sub>2</sub>O<sub>3</sub> and TiO<sub>2</sub> added in 10-30 wt% by weight ratio. Test samples were prepared using an open mould type die. Tensile, three point bending and hardness tests were carried out. The tensile strength, elastic modulus, elongation at break, flexural strength, flexural modulus and the hardness of the composite materials were obtained and evaluated. It was seen from the results that the level of the mechanical properties of the epoxy composites is highly influenced by micro filler content.

**Keywords :** composites, epoxy, fillers, mechanical properties

**Conference Title :** ICMMP 2015 : International Conference on Microstructure and Materials Properties

**Conference Location :** Vancouver, Canada

**Conference Dates :** August 06-07, 2015