

# **Properties of Tyre Dust-Filled Low Density Polyethylene Composites: The Effect of Phthalic Anhydride**

## **Abstract**

The effect of phthalic anhydride as a new coupling agent on the properties of low density polyethylene/tyre dust (LDPE/TD) composites was studied. LDPE/TD composites with different tyre dust filler loading and the addition of phthalic anhydride were prepared with Z-blade mixer. The result indicated that LDPE/TD<sub>M</sub> composites with phthalic anhydride show higher tensile strength, modulus of elasticity, thermal stability and swelling resistance than LDPE/TD composites. The interfacial adhesion between LDPE and TD was improved with the addition of phthalic anhydride as evidenced by the morphological study.