

## **The effects of dynamic vulcanization in virgin polyethylene (vPE)/ recycled polyethylene (rPE)/ ethylene propylene diene terpolymer (EPDM) blends: Tensile properties and morphology**

### **Abstract**

The effects of dynamic vulcanisation in vPE/rPE/EPDM blends were studied. The discarded polyethylene used in the study was obtained from local cable manufacturers. The effects of different sulfur loading on the tensile properties and morphology of the thermoplastics elastomer blends were examined. Results show that the tensile properties (except  $E_B$ ) increased as increasing in sulfur loading. Scanning electron microscopy indicates that a uniform distribution of vulcanised EPDM in vPE/rPE/EPDM blends.

**Keywords;** Dynamic Vulcanization, Morphology, rPE, Tensile Property, vPE