

Physical and morphological properties of styrene butadiene rubber/recycled chloroprene rubber (SBR/CRr) blends - The effects of TOR as a compatibilizer

Abstract

The effects of physical and morphological properties of TOR as a compatibilizer of styrene butadiene rubber/recycled chloroprene rubber (SBR/CRr) blends were investigated. Blends. Both uncompatibilised and compatibilised SBR/CRr blends were prepared using a two roll mill at room temperature with blends ratios 95/5, 85/15, 75/25, 65/35 and 50/50. It can be seen that, both hardness and crosslink density of uncompatibilised and compatibilised SBR/CRr blends increased with increasing of CRr content. The incorporation of CRr in the SBR/CRr blends enhanced the cross-linking density properties of SBR/CRr blends. The scanning electron microscopy (SEM) illustrates the tensile fracture surface of compatibilised SBR/CRr blends at 5 and 50 blend ratios more rougher surfaces with many tearing lines compared to uncompatibilised SBR/CRr.

Keywords; Crosslink Density, Hardness, Recycled CR, SBR, Scanning Electron Microscopy