

Physical and morphological properties of styrene butadiene rubber/recycled chloroprene rubber (SBR/CRr) blends

Abstract

The effects of physical and morphological properties of styrene butadiene rubber/virgin chloroprene rubber blends (SBR/CRv) and styrene butadiene rubber/recycled chloroprene rubber blends (SBR/CRr) were investigated. Both SBR/CRv blends and SBR/CRr blends were prepared using two roll mill at room temperature with blend ratios 95/5, 85/15, 75/25, 65/35 and 50/50. The range size of CRr used in this study was 0.3 - 0.7 mm. The SBR/CRr blends shows higher value of hardness and crosslink density compared to SBR/CRv blends at all blend ratios. The scanning electron microscopy (SEM) of tensile fracture surface of SBR/CRr blends at 15 blend ratio illustrated a better adhesion and dispersion of CRr with SBR matrix compared with SBR/CRv blends.

Keywords

Physical properties; Recycled CR; SBR; Scanning electron microscopy; Virgin CR