

MECHANICAL PROPERTIES OF COMPOUNDED NATURAL LATEX/ GRAPHITE COMPOSITES

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Abstract

Attempts were made to investigate the mechanical properties of compounded natural latex / natural graphite composites. Compounded natural latex was used to prepare the composites. Different composites were prepared by changing the graphite percentage in compounded latex. All the composites were characterized by using X-ray diffraction (XRD), scanning electron microscopy (SEM), and Fourier transform infrared spectroscopy (FTIR). The mechanical properties of all composite were tested according to the standard method. The tensile strength of the compounded natural rubber graphite composite was increased up to 60% of graphite addition in rubber. The Young's moduli of composites were found to be improved. High hardness of the compounded natural rubber graphite composite was observed at 60% of graphite. The properties of compounded natural latex /graphite investigate in the present study will be useful for many applications including electronic devices, automobiles, toys, heavy equipment industry, battery box, consumer products etc.

Keywords: *graphite; compounded latex; mechanical properties*