

## Characterization and Properties of Poly Vinyl Chloride (PVC)/Organoclay Nanocomposites

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The aim of this work was to study the effects of an Organo montmorillonite or organoclay on the properties of a Poly Vinyl Chloride (PVC) polymer used in the fabrication of electrical cable sheath in order to replace the chalk by organoclay in the cable PVC sheath manufacturing. The resulted nanocomposite blend, based on organoclay and PVC polymer, was prepared by melt blending. The results obtained showed a slight improvement of the blend mechanical properties (tensile strength, and elongation at break) when the amount of the organoclay was 1 wt %. The thermal stability (deshydrochloration test) is maximal when the concentration of the organoclay was equal to 1 wt %. The water uptake study reveals that the amount of the absorbed water does not exceed 0.1 wt % when the concentration of the organoclay is 1.5 wt %. A rheological test revealed that the addition of organoclay had not increased the melt viscosity of the PVC /OMMT nanocomposite blend.

### Biography:

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