

Using Sugar Mill Waste for Biobased Epoxy Composites

Authors : Ulku Soydal, Mustafa Esen Marti, Gulnare Ahmetli

Abstract : In this study, precipitated calcium carbonate lime waste (LW) from sugar beet process was recycled as the raw material for the preparation of composite materials. Epoxidized soybean oil (ESO) was used as a co-matrix in 50 wt% with DGEBA type epoxy resin (ER). XRD was used for characterization of composites. Effects of ESO and LW filler amounts on mechanical properties of neat ER were investigated. Modification of ER with ESO remarkably enhanced plasticity of ER.

Keywords : epoxy resin, biocomposite, lime waste, properties

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