

Poly (urethane-urea)-Epoxy glass fiber reinforced composites

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Abstract : A series of Poly (urethane-urea)s (PUU)s were synthesized using Toluene 2, 4-diisocyanate, various 2-amino benzothiazoles and 3-amino phenol. All the PUUs were characterized by elemental analysis, spectral studies, number average molecular weight (\overline{M}_n) and thermogravimetry. Further reaction of PUUs was carried out with an epoxy resin (i.e. DGEBA). The curing study of prepared resins was monitored by DSC. Based on DSC thermograms glass fiber reinforced composites have been laminated and characterized by chemical, mechanical and electrical properties. The unreinforced cured resins were subjected to thermogravimetric analysis (TGA).

Keywords : Poly (urethane-urea) s, Epoxy, glass reinforced composites, Thermogravimetry analysis (TGA), Number average molecular weight (\overline{M}_n), Differential Scanning Calorimeter (DSC).

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