

THE EFFECT OF CURING TECHNIQUE ON THERMAL PROPERTIES OF BISMALEIMIDE RESINS

Ismail Zainol

Advanced Materials Research Centre (AMREC), SIRIM Berhad, Lot 34, Jalan Hi-Tech 2/3, Kulim Hi-Tech Park, 09000 Kulim, Kedah. Email: ismail@sirim.my

ABSTRACT

Bismaleimide resin was cured using two different techniques i.e conventional and microwave ovens. Thermal properties of the samples cured using both techniques were determined and the results were compared to predict the difference in morphology. The sample was studied using differential scanning calorimetry (DSC) to determine thermal characteristics of the sample and degree of cure. Dynamic mechanical properties such as storage modulus and loss tangent were studied using dynamic mechanical thermal analysis (DMTA). Modulated differential scanning calorimetry (MDSC) was used to determine the glass transition temperature. The DSC results showed that microwave heats samples faster than conventional oven. Thermal properties from DMTA and MDSC results proved that different network structure was formed in both curing techniques where conventionally cured sample showed higher cross-linking density.

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