

Study on preparation and characterization of an epoxy containing azomethine mesogen

김진욱, 최중소, 나재식*
광운대학교
(najaesik@kw.ac.kr*)

In this study, 1,1'-bis[4-(2,3-epoxypropoxyphenyleneinimethyl)]-2,2'-dimethylbiphenylene (BMPE) was synthesized and characterized by FT-IR and NMR. The effect of 1,1'-bis[4-(2,3-epoxypropoxyphenyleneinimethyl)]-2,2'-dimethylbiphenylene (BMPE) content on mechanical and thermal properties of its blends with diglycidyl ether of biphenol A (DGEBA) was investigated by DSC and polarizing optical microscope. The improvement of mechanical properties of DGEBA modified with 1,1'-bis[4-(2,3-epoxypropoxyphenyleneinimethyl)]-2,2'-dimethylbiphenylene (BMPE) was achieved without reducing thermal resistance. Tensile strength and elongation of DGEBA-BMPE (8:2) increased, and the glass transition temperature increased compared with the DGEBA-DDS blend.