聚甲基丙烯酸甲酯／黏土複合材料流變行為探討

In this study distinct kinds of clay, Attapulgite and Kaolinite, are blended with polymethyl methacrylate respectively, to produce PMMA/clay composites. A twin-screw mixer (Brabender, Plasti-Corder) was used in this blending process. The X-ray diffraction patterns show that the gallery distance of the unmodified clay in the composites is not changed even through such high-shear mixing. They are also justified as the traditional composites (not in nanoscale) with the melt rheological data. However, it is worthy of noting that the rheological parameters(viscosity and modulus) of the PMMA/ Attapulgite, PMMA/ Kaolinite seems to have higher values than PMMA/Montmorillonte, all on the basis of unmodified clays.