

PU/clay nanocomposite with reactive organifier

배수빈, 정인재*, 김창기¹

한국과학기술원; ¹Agency for defense development

(Chung@kaist.ac.kr*)

The series of HTPB (hydroxyl terminated polybutadiene)/organo-clay nanocomposite was formed by melt blending with Rotatory&Revolutionary mixer which generated high shear stress. Organoclays were formed by modifying the pristine clays with organifiers which had different functional group. They were dispersed in HTPB to produce nanocomposites. The organifiers with hydroxyl group show the interaction with HTPB. Moreover, those organifiers and HTPB were reacted with IPDI and formed polyurethane nanocomposite. Therefore, the material can have more upgrade quality.