

The Effect of Talc Concentration on the Peeling Characteristics of UV-curable Acrylic Coating Agent

양주희, 우승한¹, 이철우^{1,†}
한밭대학교 RIC; ¹한밭대학교
(cwlee@hanbat.ac.kr[†])

As the usage of tempered glass for touch panel increased rapidly with the development of industry, the amount of UV-curable coating agent used to protect glass surface during a tempered glass manufacturing process increased as well. In order to reduce a curing time, UV curable resins are preferred to thermosetting resins. Monomer, oligomer, photo initiator, talc and additives are included in the coating agent. Uniformity of the coating, curing time, adhesive strength, hardness, and detachability are important factors to achieve good performance.

In this study, various acrylates were used as monomers and the effects of physical properties with variable monomer contents and mixing ratio of monomers were investigated. The number of functional groups of acrylate monomers, the type and the amount of photo initiator, the amount of talc additive had great effects on the physical properties such as adhesive strength, curing time, thickness, hardness and detachability of the polymer coating. The increase in oligomer contents increased the hardness and adhesiveness alongside dissection time. The effect of talc concentration on the peeling properties were investigated as well.