



EFFECT OF GRAFTING STRUCTURE OF ACRYLONITRILE-BUTADIENE-STYRENE ON THE MORPHOLOGY AND RHEOLOGICAL PROPERTIES OF PC/ABS BLEND

Hyuk Jin Jung^{a, b}, Seung-Shik Shin^b, JongTae Yoon^b, Youngjun Lee^b and O Ok Park^a

^a Department of Chemical and Biomolecular Eng., KAIST, 373-1, Guseong-dong, Yuseong-gu, Daejeon, 305-701, Korea¹
and ^b Chemical R&D Center, Cheil Ind. INC., 332-2, Gocheon-dong, Uiwang-si, Gyeonggi-Do, 437-711, Korea.

*Corresponding author: ookpark@kaist.ac.kr

Polycarbonate (PC) is an engineering plastic which has a good mechanical strength, transparency, heat resistance and self flame retardancy. However, PC has a poor processability, notched impact strength and chemical resistance. In order to overcome the shortcomings, PC is usually blended with other polymers or modifiers. PC and acrylonitrile-butadiene-styrene terpolymer (ABS) blend has been widely used for various applications because of its good properties. Often, grafted ABS is used alone as an impact modifier for PC without SAN. In this system, the impact strength and the surface quality of the final product are highly dependent on the dispersion state of grafted ABS. In order to achieve good properties, it is necessary to understand the interaction between grafted SAN of ABS and PC matrix. In this study, several PB-g-SAN impact modifiers with different grafting degrees will be synthesized by seed emulsion copolymerization and the effect of grafting degree of PB-g-SAN on the morphology and rheological properties of PC/PB-g-SAN blend will be investigated. The result of this study may lead to a better understanding of designing grafted ABS for PC/ABS blend systems.