Effect of Short Glass Fiber on Mechanical and Rheological Properties of PMMA/SBR Vulcanizate

G. M. Mamoor, Nida Qamar, Umer Mehmood, Muhammad Shahzad Kamal

Abstract

Thermoplastic vulcanizates of polymethyl methacrylate (PMMA) and styrene butadiene rubber (SBR) were prepared by melt processing using dicumyl peroxide (DCP) as a vulcanizing agent. Effect of short glass fiber (SGF) on mechanical and rheological properties of PMMA/SBR vulcanizates has been investigated using universal testing machine and melt flow indexer. The results revealed increase in tensile strength and decrease in melt flow index as well as elongation at break on increasing concentration of short glass fiber. It was also scrutinized that with increase in fiber contents consistency index increases. On increasing fiber contents vulcanizates show more pronounced pseudoplastic behaviour.

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Department, University of Engineering and Technology, Lahore, Pakistan
Pakistan

Muhammad Shahzad Kamal
University of engineering & technology lahore
Pakistan

lecturer polymer & process engineering department UET lahore.