

Incorporation of different fillers into EPDM matrix to enhance on mechanical and set properties

박대웅, 홍창국†

전남대학교

(hongck@chonnam.ac.kr†)

The sealing resilience and the durability is major impedient of EPDM composite in the automobile industry. Thus, in this study various fillers such as carbon black, talc, and silica are incorporated into EPDM matrices mainly to achieve improvement of service properties. Mechanical and set properties were measured by using universal testing machine and compression set measurement method according to ASTM D412 and D395 repectively. The tensile strength, and elongation at break of the talc-, and silica-filled composites were much higher than those of the CB(N330 & N550)-filled ones. However, the CB-filled composites showed the lowest compression set value(18.6%) with increased N330 loading. Our results demonstrated that the EPDM/CB composite material showed better sealing resilience and the durability compared to the rest of composites.