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Co-PP/EPDM Blend Optimization Using D-Optimal Design for Medical Applications (Article)

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Abstract

This work focuses on the optimization and identification of blend with balanced mechanical properties of Co-PP/EPDM. The blending factors include time, temperature, screw speed, and blend ratio. Tensile strength and elongation at break were studied as the two responses. D-Optimal model was used to fit the regression line, which was validated using analysis of variance and "lack of fit" test. An average error of 10% (for tensile strength) and 3.2% (for elongation at break) was observed between the actual and predicted values. Further, the thermal stability, dynamic mechanical analysis, and phase morphology of the optimized blend were also investigated. © 2017 Taylor & Francis.

Author keywords

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