

Technical articles

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TSSR measurement as an effective test method for crosslinking of TPS-SEBS 152

The world of TPS-SEBS are the multicomponent hybrid parts. Examples are found in all areas of the daily life indoor and outdoor, for example toothbrush handles, all kinds of grips, sealings for food containers, cup holders in the car and so on. The typical service temperature range is between -60 °C up to 125 °C. In this article we present crosslinked TPS which find their application fields in parts with peak service temperatures above 150 °C. The crosslinking effects were effectively validated by means of a TSSR-Meter (temperature scanning stress relaxation).

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Thermoplastic vulcanizates based on dynamically vulcanized polypropylene/carboxylated nitrile rubber blends 154

Thermoplastic vulcanizates (TPVs) based on polypropylene (PP) and carboxylated nitrile rubber (XNBR) with improved mechanical properties were prepared by dynamic vulcanization using dicumyl peroxide (DCP) in combination with N,NO-m-phenylene-bis-maleimide (BMI) as a cross-linking system. The effect of PP grafted with maleic anhydride (PP-g-MA) or with glycidyl methacrylate (PP-g-GMA) and triethylene-tetramine (TETA) as the compatibilizing systems on the mechanical, morphological, and dynamic mechanical properties of PP/XNBR blends was investigated.

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Mechanical performance of novel polyisobutylene-based elastomeric polyurethanes before and after hydrolysis..... 160

The mechanical performance of thermoplastic elastomeric polyurethanes (PUs) before and after hydrolysis is investigated. These new PUs were prepared with a new asymmetric polyisobutylene-diol (PIB-diol), without the use of solvents, and with short reaction times. The PUs were made with dicyclohexylmethane 4,4'-diisocyanate and 1,4-butanediol in the hard segments and poly(hexamethylene carbonate) (PC)-diol and polyisobutylene (PIB)-diol in the soft segments. The functionality of PIB-diol was verified by mass spectrometry.

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