

Technical articles

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Innovations in thermoplastic elastomers bonding to polyamides..... 92

New innovations in thermoplastic elastomers (TPE) have led to achieve significant bonding to wide variety of polyamides (PA) comprising of PA6, PA6.6, and PA12, and glass fiber reinforced PA. These innovative TPEs offer value compared with several competitive materials, with equivalent or better performance, and ease of processability. The softer polyamide overmolding grades have remarkably better oil resistance compared to leading competitive overmolding TPE grades. These TPEs are being evaluated in a wide range of polyamide overmolding applications.

CH. HOPMANN, CH. ZIMMERMANN

Experimental investigations of the effect of external mechanical and thermal stress on the relaxation behaviour of a thermoplastic vulcanisate 98

The material behaviour of thermoplastic elastomers (TPE), especially of thermoplastic vulcanisates (TPV), shows a strongly direction-dependent material behaviour due to the process-induced phase morphology. This affects the short-term material behaviour and has probably an impact on the long-term behaviour. In order to consider this direction-dependent material behaviour during the simulative design and construction of TPE parts, corresponding dependencies between various influencing factors have to be identified. Within the first part of a public funded research project for the modelling of the direction-dependent material behaviour of TPE, the main influencing factors (load level, load direction, temperature and stress state) are investigated with regard to the direction-dependent material behaviour. The results of the investigations regarding the relaxation behaviour are presented in this contribution. Furthermore, corresponding dependencies are carried out.

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