

Comport properties of flexible polyurethane foams with various types of isocyanates

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Flexible polyurethane foams for automotive seat materials can be manufactured with various ingredients such as polyols, isocyanates, catalysts, cross-linkers, blowing agents, surfactants, etc. Among those components, isocyanate molecular types (MDI and TDI) were considered as a experimental parameter to investigate their comport properties (hysteresis loss, sag factor, compression set). Physical properties of polyurethane foams are generally affected by morphological properties and dynamic behavior of the materials. For analyzing physical, morphological, dynamic mechanical properties of polyurethane foams, scanning electron microscopy (SEM), dynamic mechanical analysis (DMA), and universal testing machine (UTM) were used. Comport properties of the flexible polyurethane foams showed the highest value at the optimum TDI content.