

Assessing crosslink density of rubber vulcanizates using three different approaches

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The determination of crosslink density in rubber vulcanizates remains a complex issue in practice. This presentation gives a concise overview of the commonly used laboratory measurement techniques for crosslink density. It draws the attention to the equilibrium swelling and Mooney-Rivlin mechanical approaches in comparison to a recently developed method, called Temperature Scanning Stress Relaxation (TSSR). Advantages and disadvantages of these techniques are discussed for unfilled and filled compounds with various curing systems.