



## **Phase Reinforcement Effects in TPV Nanocomposites**

### *Abstract*

Thermoplastic vulcanizates (TPV's) have been extensively studied and gained wide acceptance because of their rubber-like properties and thermoplastic processability. Polymer / layered silicate nanocomposites of various types have similarly received much attention as promising high performance materials. Combining these two complementary technologies to form a TPV nanocomposite generates interesting properties that significantly depend on the phase location of the silicate nanoclay reinforcement – whether it lies in the dispersed rubber phase or in the continuous plastic matrix.

Our objective is to selectively reinforce either the plastic phase or the rubber phase in some typical TPV's and observe the distinctive effect of reinforcement partitioning on mechanical and rheological properties.

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