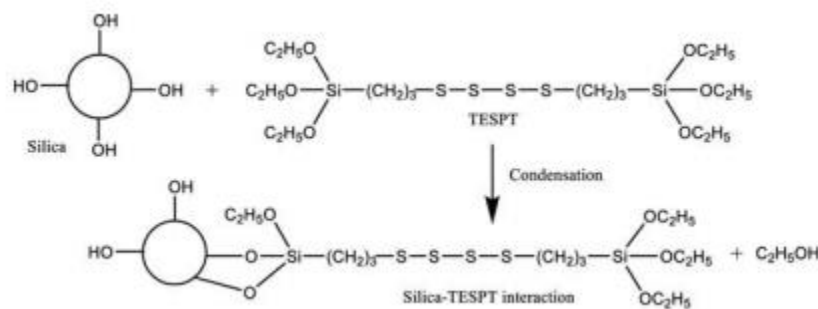


Peroxide-Cured Silica Filled Natural Rubber Influenced by Organosilane

Generally, particulate reinforcing fillers, including silica, are technically essential to achieve the required rubber properties, such as tensile strength, modulus, and abrasion resistance. Also, the properties of filled rubber vulcanizates depend strongly on many factors. In this work, the influence of silane coupling agent -bis (triethoxysilylpropyl) tetrasulfide (TESPT)- on properties of silica-filled compounds under peroxide curing is of interest. Considerable improvements in silica-rubber interaction, and thus mechanical properties (such as tensile strength, elongation at break, and tear strength) and dynamic mechanical properties are achieved by the incorporation of TESPT.

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Reference:

S. Pattanawanidchai, P. Sae-Oui, **C. Sirisinha**, C. Siriwong, Cure retardation of peroxide-cured silica filled natural rubber influenced by organosilane, *Polymer Engineering and Science*, 59(1), 42-48 2019.

