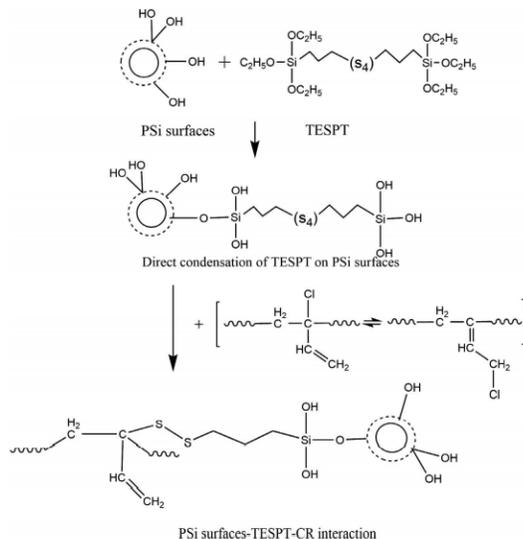


Study on Performance of Filled Chloroprene Rubber: Effects of Surface Modifying Agents

Chloroprene rubber (CR) is widely used in many automotive and construction industries, such as adhesives, hoses, vibration isolators, etc. The utilization of CR in engineering products often requires reinforcing filler, including precipitated silica. Because of the hydrophilicity of silica surface, the agglomeration of silica aggregates takes place, and limits the use of silica. Such limitations could be overcome in practice by modifying the silica surface. In this study, different types of modifying agents affecting the properties of silica-filled chloroprene rubber are investigated. The modifying agents used in the study are polyethylene glycol (PEG), 3-aminopropyl triethoxysilane (APTES), and bis-(3-triethoxysilylpropyl) tetrasulfide (TESPT). The results demonstrate the best overall properties of CR products.

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Reference:

C. Siriwong, P. Sae-Oui, **C. Sirisinha**, Performance comparison of various surface modifying agents on properties of silica-filled chloroprene rubber, *Rubber Chemistry and Technology*, 90 (1), 146-158, 2017.