Properties of Tire Tread Compounds Based on Functionalized Styrene-Butadiene Rubber and Functionalized Natural Rubber

Development of tread compounds for passenger car tires generally focuses on three main properties, namely, (i) wet grip; (ii) rolling resistance; and (iii) abrasion resistance since these properties are used to reflect the tire tread performance. For high-performance passenger car tires, the tread compound is generally made from solution styrene-butadiene rubber reinforced with silane-treated silica/carbon black hybrid filler because it can significantly improve the rolling resistance of the tread compound. In this work, tire tread compounds based on various rubber types are prepared. Properties of tire tread compounds and tire tread performance are reported.

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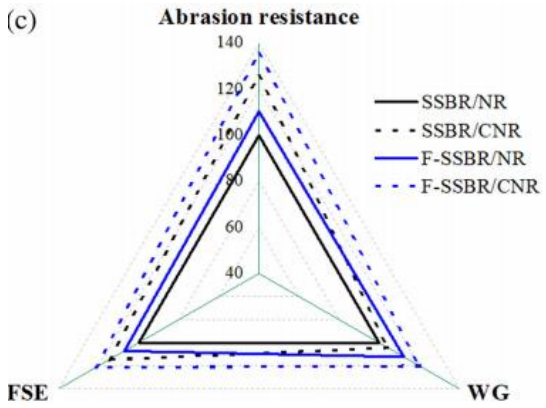

The “magic triangle” of tire performance for various rubber blends.

Reference:

C. Sirisinha, P. Sae-oui, K. Suchiva, P. Thaptong, Properties of tire tread compounds based on functionalized styrene butadiene rubber and functionalized natural rubber, Journal of Applied Polymer Science, 137(20), 48696, 2019.