

- posites by Rheometric and Equilibrium Swelling Properties [J]. Polymer Bulletin, 2008, 60(2): 281-290.
- [9] Carmen Lane Giri Zine, Alberto Justino da Conceicao, Leila L. Y. Visconte, et al. Styrene-Butadiene Rubber/Cellulose II/Clay Nanocomposites Prepared by Cocoagulation-Mechanical Properties[J]. Journal of Applied Polymer Science, 2011, 120(3): 1468-1474.
- [10] Wu Q J, Marielle Henriksson, Liu X H. A High Strength Nanocomposite Based on Microcrystalline Cellulose and Polyurethane[J]. American Chemical Society, 2007, 8(12): 3687-3692.

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## Effect of Microcrystalline Cellulose/Silica Composite Filler on Properties of High Vinyl SSBR

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**Abstract:** The effect of microcrystalline cellulose/silica composite filler on the properties of high vinyl SSBR was investigated. Microcrystalline cellulose was used to replace part of the silica in the filler system while the total addition level of filler kept the same. The results showed that, as the addition level of microcrystalline cellulose increased, the Mooney viscosity of the compound decreased,  $t_{10}$  was extended,  $t_{90}$  was shortened, the processability was improved and cure rate was enhanced. The Shore A hardness, modulus at 300% elongation and tensile strength of the vulcanizates decreased, the elongation at break increased, and the wear resistance decreased. When the addition level of microcrystalline cellulose was 5 phr, the vulcanizates possessed the best tear strength, high wet skid resistance and low rolling resistance.

**Key words:** microcrystalline cellulose; silica; SSBR; processability; dynamic property

### 固特异牧马人将成为塔科马原配胎

中图分类号:TQ336.1 文献标志码:D

美国《现代轮胎经销商》(www.moderntire-dealer.com)2015年8月20日报道:

固特异牧马人全地形冒险芳纶轮胎(见图1)成为2016款丰田塔科马TRD越野级皮卡的唯一原配胎。



图 1 固特异牧马人全地形冒险轮胎

丰田汽车公司选择唯一的固特异牧马人轮胎配备其2016款塔科马TRD越野级中型皮卡。固特异轮胎橡胶有限公司将提供牧马人全地形冒险芳纶轮胎,规格为P265/70R16。

“数十年来,固特异和丰田已经建立了帮助越野爱好者征服世界最艰难地形的声誉,”固特异北美原配胎销售副总裁Johann Finkelmeier说,“我们的牧马人全地形冒险芳纶轮胎专为2016款塔科马进行了调整:在提供卓越的日常高速公路行驶性能的同时还提供即时越野性能。”

固特异表示,牧马人全地形冒险芳纶轮胎拥有多项创新技术,包括有助于胎侧抗切割和刺扎的Durawall技术。其开放的胎面花纹可在潮湿和泥泞等路面条件下提供越野牵引性能,而特殊的胎面胶配方和啮合边缘则有助于提高雨雪道路上的抓地力。

(孙斯文摘译 吴秀兰校)