

- of Tires. Part II: Experimental Observations on Effect of Filler-Elastomer Interactions on Water Lubrication[J]. Rubber Chemistry and Technology, 2008, 81 (4): 576-599.
- [5] Wang Y X, Wu Y P, Zhang L Q, et al. Influence of Filler Type on Wet Skid Resistance of SSBR/BR Composites: Effects from Roughness and Micro-hardness of Rubber Surface[J]. Applied Surface Science, 2011, 257 (6): 2058-2065.
- [6] 赵志正. 白炭黑-硅烷填充剂体系的化学性质及其对橡胶的补强性能[J]. 世界橡胶工业, 2007, 34 (10): 11-17.
- [7] 吉欣宇, 刘震, 王茂英. 新型偶联剂Si747对白炭黑填充溶聚丁苯橡胶/顺丁橡胶并用胶加工性能及动态性能的影响[J]. 橡胶科技, 2016, 14 (7): 17-21.
- [8] Ten Brinke J W, Debnath S C, Reuvekamp L A E M, et al. The Influence of Silane Sulfur and Carbon Black on Process of a Silica Reinforced Tire Tread Compound[J]. Rubber Chemistry and Technology, 2003, 76 (1): 12-35.
- [9] 刘大晨, 吴新亮, 汤琦, 等. 稻壳源白炭黑/炭黑/天然橡胶复合材料的性能研究[J]. 橡胶工业, 2016, 63 (8): 458-463.
- [10] Futamura S. Deformation Index—Concept for Hysteretic Energy-Loss Process[J]. Rubber Chemistry and Technology, 1998, 71 (3): 520-589.

收稿日期: 2018-11-27

Application of Silane Coupling Agent Si747/OTES Blend System in Silica Compound

CHEN Sheng¹, XING Weiyun¹, WANG Danling^{1,2}, CHENG Qiming¹, REN Fujun¹

(1. Zhongce Rubber Group Co., Ltd, Hangzhou 310018, China; 2. Zhejiang University of Technology, Hangzhou 310018, China)

Abstract: The application of silane coupling agent Si747/OTES blend system in the silica compound was studied. The results showed that, by adjusting the blending ratio of silane coupling agent Si747/OTES, the dispersion of silica could be improved and the aggregation of silica could be inhibited, the Mooney scorch time was extended, and the processability of the compound which could be deteriorated due to the high activity of the sulfhydryl groups of silane coupling agent Si747 was improved. In addition, the introduction of silane coupling agent OTES only had slight influence on the physical properties of the vulcanizate.

Key words: silane coupling agent; silica; dispersion; dynamic mechanical property

Petlas推出新PT-Trac农业轮胎

美国《现代轮胎经销商》(www.moderntiredealer.com) 2019年1月31日报道:

Petlas轮胎公司称其新PT-Trac轮胎(见图1)满足该品牌农业轮胎客户的需求和新要求。

采用公司的CupWheel技术, 该轮胎具有如下特点。

- 均匀压力分布。轮胎以极宽的接地印痕轻柔接地, 减轻土壤压实, 免伤土中作物的根。

- 减小滑移, 增大牵引力。轮胎可“完全传递车辆动力至地面, 减小滑移, 增大牵引力”, 进而大幅改善性能和燃油经济性。

- 平滑行驶。轮胎平滑行驶不仅可提高舒适性, 还可确保平稳牵引, 这对田间精确耕作至为



图1 PT-Trac轮胎

关键。

- 耐久性能。轮胎采用卓越的胎侧设计和特殊的胎面胶料, 具有优异的耐磨和耐久性能。

(吴秀兰摘译 赵敏校)