

提高,但超过一定用量后形成多层包覆或偶联剂间的反应产物也会影响炭黑表面的改性,从而不利于炭黑分散。

### 3 结论

在轮胎胎面胶中加入炭黑分散剂HT-5,在明显提高炭黑分散性的同时,也可以改善混炼胶的加工性能,降低填料粒子团聚的可能性,且不影响胶料的物理性能。当炭黑分散剂HT-5用量为2.5

份时,胶料的综合性能和炭黑分散效果最佳。

### 参考文献:

- [1] 邹梦娇,陈福林,岑兰,等. 纳米填料的改性及其在橡胶中的分散研究进展[J]. 橡胶工业,2012,59(4):247-255.
- [2] 赵素合,隋刚. 均匀分散剂的作用机理[J]. 合成橡胶工业,2001,24(4):215-218.
- [3] 张士齐,贾红兵,刘卫东. 填料-橡胶的化学和物理作用及其对补强的影响[J]. 橡胶工业,2003,50(4):201-204.

收稿日期:2015-10-19

## Application of Carbon Black Dispersing Agent HT-5 in Tread Compound of Tire

SUN Peng<sup>1</sup>, ZHAO Guowei<sup>2</sup>, XU Yunhui<sup>1</sup>, CONG Houluo<sup>1</sup>, ZHU Xinming<sup>1</sup>, WANG Yanqiu<sup>1</sup>

(1. Xuzhou College of Industrial Technology, Xuzhou 221140, China; 2. XinMi City ChaoXin Chemical Factory of HeNan Province, Xinmi 452370, China)

**Abstract:** The application of carbon black dispersing agent HT-5 in the tread compound of tire was investigated. The results showed that, by adding HT-5 in the tread compound, the Mooney viscosity decreased, the scorch time and optimum cure time were extended. The hardness, stress at 300% elongation and rebound value of the vulcanizates increased, the compression heat build-up decreased, the fatigue resistance and the dispersion of carbon black were improved. When the addition level of HT-5 was 2.5 phr, the overall performance of the compound and the dispersion of carbon black were the best.

**Key words:** carbon black dispersing agent; tread compound; dispersion

### Carlstar推出Versa Trail ATR轮胎

中图分类号:TQ336.1 文献标志码:D

美国《现代轮胎经销商》(www.moderntiredealer.com)2016年1月6日报道:

Carlstar集团有限责任公司为多用途全地形越野车推出第1代多用途子午线轮胎(见图1)。该款Versa Trail ATR轮胎将以Carlisle商标销售。



图1 Versa Trail ATR多用途子午线轮胎

“随着多用途车需求量的增长,驾驶员对车辆的行驶性能和在不同路面的操纵性能的要求不断提高。”Carlstar集团研究与开发部副主席Rick Goetz说,“设计改进和技术提高使得Versa Trail轮胎能够在工作和娱乐驾驶中表现完美。”

Carlstar集团研发团队尝试将19 mm(3/4英寸)无方向性的胎面花纹应用到全路况ATR子午线轮胎中。新的刚性胎面胶技术提高了胎面抗切割和崩花掉块性能,延长了胎面寿命;6层胎体减缓轮胎疲劳,具有时尚的深轮辋设计,Versa Trail轮胎在不牺牲车辆的舒适性能和优异的操纵性能前提下,提高其不同路况的行驶能力。

Versa Trail轮胎在美国田纳西州克林顿生产,为绝大多数多用途和全地形越野车提供11种规格。

(肖家瑞摘译 李静萍校)