

表 8 胎面胶的动态力学性能数据

项 目	配方编号	
	YY3	YY4
玻璃化温度/℃	-9.2	-10.8
$\tan\delta$		
0℃	0.552 2	0.482 6
60℃	0.162 3	0.191 8

从图 3 和表 8 可以看出,YY3 配方硫化胶的 0℃下 $\tan\delta$ 较大,60℃下 $\tan\delta$ 较小,说明其滚动阻力较低,抗湿滑性能较好。

2.3.2.6 脆性温度

YY3 和 YY4 胎面胶配方硫化胶的脆性温度分别为-37 和-42℃,两者间的差异是填充油的差别导致的。

3 结论

(1)与 JK-SSBR 相比,HV-SSBR 的相对分子质量较小,含胶率较高。

(2)与 JK-SSBR 相比,HV-SSBR 标准配方胶料的焦烧时间较长,硫化速度较快,物理性能和滚动阻力性能较差。

(3)与 JK-SSBR 相比,HV-SSBR 胎面胶配方胶料的焦烧时间较短,硫化速度较快,物理性能和动态力学性能较好,可用于高性能轿车子午线轮胎胎面胶,值得继续开发,并加快进入工业化生产,以尽快推入市场,满足国内轮胎行业的巨大需求。

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Application of Domestic High-vinyl Solution Styrene-butadiene Rubber in Tire Tread Compound

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Abstract: The properties of domestic high-vinyl solution styrene-butadiene rubber (HV-SSBR) were investigated and compared with imported solution styrene-butadiene rubber (JK-SSBR) based on a standard compound formulation and a tire tread compound formulation. The results showed that, compared with JK-SSBR, the relative molecular weight of HV-SSBR was lower and the gum content was higher. With the standard formulation, the scorch time of the domestic HV-SSBR compound was longer, the curing rate was higher, and the physical properties and rolling resistance were worse. For the tire tread formulation, the scorch time of the domestic HV-SSBR compound was shorter, the curing speed was faster, and the physical properties and dynamic property were better. The domestic HV-SSBR can be used in the tread of high performance passenger car radial tires.

Key words: high-vinyl solution styrene-butadiene rubber; tread; physical property; dynamic property

一种自动往复式轮胎钢丝重绕机

中图分类号:TQ330.4 文献标志码:D

由双钱集团(如皋)轮胎有限公司申请的专利(公开号 CN 202571110U,公开日期 2012-12-05)“一种自动往复式轮胎钢丝重绕机”,涉及的自动往复式轮胎钢丝重绕机的机架上端安装有可快速拆卸的转轴,转轴一端通过离合机构与卷绕电动机连接,转轴上设置有钢丝盘安装支架;机架上设置有包括往复驱动杆和导柱的排绳机构,其中往复驱动丝杆上设置有端部导通的左、右旋螺旋

槽,往复驱动杆和导柱之间套装有与两者滑动配合的排线滑动座,排线滑动座内设置有嵌入左、右旋螺旋槽内的凸起。工作时排绳电动机驱动往复驱动丝杆转动,使得排线滑动座沿往复驱动丝杆轴向移动,当排线滑动座的凸起移动至左旋或右旋螺旋槽的端部时,进入另一螺旋槽内,从而实现反向轴向移动。该自动往复式轮胎钢丝重绕机无需设置电气机构来触发排绳电动机的反转,结构简单,制造成本降低。

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