

(3)DMA 分析结果表明,预硫化工艺可提高两种橡胶的相容性,进而达到较好的共硫化。

(4)与传统工艺相比,预硫化处理后的混炼胶或硫化胶的 $\tan\delta$ 均较小。这是由于预硫化处理后的混炼胶中形成了大分子-大分子网络,同时大分子-炭黑网络更加牢固;而硫化胶中的网络结构更加完善和均匀。

参考文献:

- [1] 杨清芝.实用橡胶工艺学[M].北京:化学工业出版社,2005:30-34.
- [2] 杨清芝.现代橡胶工艺学[M].北京:中国石化出版社,2004.
- [3] 崔小明.溴化丁基橡胶的加工应用研究进展[J].世界橡胶工业,2010,37(6):30-38.
- [4] 赵小平,史铁钧,王申生.丁基橡胶与卤化丁基橡胶的结构、性能及发展状况[J].安徽化工,2008,34(4):8-13.

- [5] Azima L G Saad,Salwa El-Sabbagh. Compatibility Study on Some Polymer Blend Systems by Electrical and Mechanical Techniques[J]. Journal of Applied Polymer Science,2000,79(1):60-71.
- [6] Sachin N Sathe,Surekha Devi,G S Srinivasa Rao,et al. Relationship between Morphology and Mechanical Properties of Binary and Compatibilized Ternary Blends of Polypropylene and Nylon 6[J]. Journal of Applied Polymer Science,1996,61(1):97-107.
- [7] 赵银梅,赵艳芳,唐瀚钦.丁基橡胶共混改性研究概况[J].热带农业科学,2008,28(3):60-63.
- [8] Sunil T Jose,Anoop K Anand,Rani Joseph. EPDM/CIIR Blends:Improved Mechanical Properties through Precurcuring[J]. Polymer Bulletin,2009,63(1):135-146.
- [9] 陈龙,潘庆燕,赵菲,等.炭黑/白炭黑共混比对 BR/SBR 性能的影响[J].特种橡胶制品,2012,33(2):15-18.

收稿日期:2014-03-09

Influence of Processing Technology on Properties of MFIIR/NR Blend

SHAO Hong-qi,ZHOU Xiao-lan,FENG Yu,ZHAO Ji-ruo,FENG Ying

(Qingdao University of Science and Technology/Shandong Provincial Key Laboratory of Rubber-Plastics,Qingdao 266042,China)

Abstract: The multifunctional IIR (MFIIR)/NR blend was prepared by using different processing technology,and the curing behavior,processability,physical properties and dynamic mechanical properties of the blend were investigated. The results showed that,the t_{10} and t_{90} of MFIIR/NR blend after prevulcanization were obviously prolonged,indicating that the curing agents were dispersed uniformly in rubber phase. After the prevulcanization process, the physical properties of the blend were improved. Especially,the tensile strength,elongation at break and tear strength increased significantly. The storage modulus at large strain(100%) increased after the prevulcanization,which implied the Payne effect of the vulcanizate was weakened. The network structure of MFIIR/NR blend after prevulcanization was more uniform, and MFIIR and NR could be well co-vulcanized.

Key words: multifunctional IIR;NR;blend;processing technology;property

风神轮胎花纹获外观设计专利

中图分类号:TQ336.1+1 文献标志码:D

日前,风神轮胎自主研发的 WGM80,WDR37 和 WGC52 等 8 种全钢子午线轮胎花纹获得国家知识产权局颁发的外观设计专利证书。

这 8 种花纹现已用于轮胎生产。其中 WGM80 花纹轮胎主要用于驱动轮上,也可用于导向轮和拖车轮上,适用于在矿山等极差和非铺装路面行驶;花纹采用深沟块状横花纹设计,在碎石路面上具有优异的驱动性能和制动性能。WDR37 花纹轮胎用于驱动轮上,适用于在普通和优质路面上中长途运输行驶;花纹采用雪泥花纹设计,具有优

异地面抓着力和牵引性能。WGC52 花纹轮胎用于全轮位,适用于在普通和优质路面上中短途运输行驶,宽行驶面设计使轮胎接地压力分布均匀,赋予轮胎优良的防侧滑性能。WDR34 花纹轮胎用于驱动轮上,适用于在普通和优质路面上中长途运输行驶,具有优异的地面抓着能力和牵引性能,生热低,高速性能优异。

这 8 种系列轮胎产品在配方上多采用低滚动阻力配方设计,满足欧洲标签法要求,在结构上采用低噪声和抗湿滑设计,经初期试验检测,性能均能满足标准要求。

(摘自《中国化工报》,2014-07-16)