表4 大配合试验结果

项 目	3#试验配方		生产配方	
门尼粘度[ML(1+4)100 ℃]	79		69	
门尼焦烧时间t_5(127 ℃)/min	19.5		17.8	
硫化仪数据(150 ℃)				
F_L/(dN·m)	2.87		2.89	
F_{max}/(dN·m)	16.85		18.17	
t_{10}/min	5.95		4.61	
t_{30}/min	7.89		6.18	
t_{60}/min	9.23		7.94	
t_{90}/min	13.28		11.85	
t_{100}/min	25.95		20.12	
硫化时间(150 ℃)/min	30	40	30	40
邵尔A型硬度/度	66	65	65	65
100%定伸应力/MPa	2.6	2.3	2.3	2.3
200%定伸应力/MPa	6.5	6.8	6.8	6.8
300%定伸应力/MPa	12.8	13.5	13.5	13.3
拉伸强度/MPa	24.2	26.5	26.5	26.9
拉断伸长率/%	486	498	515	521
撕裂强度/(kN·m^{-1})	82	63	92	87
回弹值/%	48		47	
DIN磨耗量/mm^3	45		65	
阿克隆磨耗量/cm^3	0.125		0.184	
tanδ(60 ℃)	0.178		0.181	
100 ℃×48 h老化后				
邵尔A型硬度/度	69		68	
100%定伸应力/MPa	3.6		3.2	
200%定伸应力/MPa	9.3		8.2	
300%定伸应力/MPa	15.9		15.8	
拉伸强度/MPa	22.5		22.2	
拉断伸长率/%	385		399	
撕裂强度/(kN·m^{-1})	49		84	
DIN磨耗量/mm^3	66		78	
阿克隆磨耗量/cm^3	0.238		0.265	

(4)在胎面胶中加入SSBR SL PBR 4089,胶料的生热和滚动阻力降低,SSBR SL PBR 4089是生产低滚动阻力高耐磨轮胎胎面胶的重要原材料。

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Application of SSBR in Tread Compound of All-steel Truck and Bus Radial Tire

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Abstract: The application of SSBR SL PBR 4089 in the tread compound of all-steel truck and bus radial tire was investigated. The results showed that when the additional level of SSBR SL PBR 4089 increased, the Mooney viscosity of the compound was higher, the processing properties were slightly decreased, the tear strength, modulus at 300% elongation, tensile strength and elongation at break also showed the trend of decrease in general, and the heat build-up and rolling resistance were reduced. With 23 phr SSBR SL PBR 4089, before aging, the DIN abrasion loss of the vulcanizate was reduced by 25% and Akron abrasion loss was reduced by 33%.

Key words: SSBR; tread compound; abrasion resistance; rolling resistance

一种沥青改性用废轮胎胶粉的表面氧化改性工艺

中图分类号:TQ335 文献标志码:D

由南开大学申请的专利(公开号 CN 103145882B,公开日期 2018-01-26)“一种沥青改性用废轮胎胶粉的表面氧化改性工艺”,涉及一种沥青改性用废轮胎胶粉的表面氧化改性工艺。具体步骤包括:将废轮胎胶粉分散在水中,加入一定量的氧化剂,25~80 ℃恒温搅拌1.5 h,其中氧化剂为二氯异氰尿酸钠、三氯异氰尿酸、次氯酸钠或过氧化氢中的一种,氧化剂用量占废轮胎胶粉质量的3%~30%,反应结束后过滤烘干得到氧化改性胶粉,将其作为沥青改性剂制备胶粉改性沥青,以调控改性沥青性能。该方法能耗低、氧化剂低廉易得、易于实现工业化应用,同时能有效调控改性沥青软化点、针入度、延度等主要性能。

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