表6 采用不同牌号苯酚甲醛树脂胶料的加工性能测试结果

项 目	商品编号			
	1	2	3	4
门尼粘度[ML(1+4)100 ℃]	83	81	80	79
门尼焦烧时间t_5(127 ℃)/min	11.30	11.02	10.40	10.27
硫化仪数据(150 ℃)				
t_{90}/min	9.08	9.88	9.57	9.95
M_L/(dN·m)	2.47	2.33	2.33	2.27
M_H/(dN·m)	41.88	39.84	39.61	39.43
M_H-M_L/(dN·m)	39.41	37.51	37.28	37.16

硫化时间有些影响。

3 结论

(1)在试验条件下,热塑性苯酚甲醛树脂的相对分子质量对胶料的焦烧时间和门尼粘度有一定影响,树脂的相对分子质量增大,胶料的焦烧时间趋于延长,门尼粘度有增大趋势。

(2)在试验条件下,热塑性苯酚甲醛树脂中游离酚含量对胶料硫化时间和门尼粘度有影响,树脂中游离酚含量增加,胶料的硫化时间趋于缩短,门尼粘度有减小趋势。

(3)市场上不同牌号的苯酚甲醛树脂对胶料加工性能影响的规律与上述结论一致。

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第12届全国橡胶助剂生产和应用技术研讨会论文(二等奖)

Influence of Molecular Weight and Free Phenol Content of Phenolic-Formaldehyde Resin on Rubber Processing Property

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Abstract: Thermoplastic phenolic-formaldehyde resins with different molecular weight and free phenol content were prepared, and the processing properties of natural rubber (NR) compounds with the resins were tested. The results showed that, the molecular weight of thermoplastic phenolic-formaldehyde resin had some effects on the scorch time and Mooney viscosity of the compound. For example, the compound with high molecular weight resin had longer scorch time and higher Mooney viscosity. The free phenol content of thermoplastic phenolic-formaldehyde resin had effects on the vulcanization time and Mooney viscosity of the compound. It was found that the compound with the resin having high content of free phenol had shorter vulcanization time and lower Mooney viscosity.

Key words: thermoplastic phenolic-formaldehyde resin; molecular weight; free phenol; scorch time; vulcanization time; Mooney viscosity

一种新型的轮胎胶边处理装置

中图分类号:TQ330.4$^+$91 文献标志码:D

由新东岳集团有限公司申请的专利(公开号CN 105479635A,公开日期 2016-04-13)“一种新型的轮胎胶边处理装置”,涉及的新型轮胎胶边处理装置具有弧形槽、有角度的斜坡、锋利的胶边切口。该装置直接使用厚度1 mm的钢片压出具有弧形槽的断面形状,在弧形槽的一端按一定角度构成斜坡,形成锋利的胶边切口。轮胎胶边在切口处被剪切掉。该装置有多个切口,且切口可以通过延长斜坡的长度来调整锋利程度。

(本刊编辑部 马 晓)