

的变化有较好的对应关系。

### 3 结论

(1)随着 SBR-*g*-MAH 用量的增大,白炭黑/SBR 胶料的  $t_{10}$  缩短,  $t_{90}$  延长;  $M_L$  和  $M_H$  先增大后减小,当 SBR/SBR-*g*-MAH 并用比为 50/50 时达到最大值。

(2)随着 SBR-*g*-MAH 用量的增大,白炭黑/SBR 复合材料的邵尔 A 型硬度、300%定伸应力和拉断伸长率呈增大趋势;拉伸强度和撕裂强度先增大后减小,当 SBR/SBR-*g*-MAH 并用比为 50/50 时达到最大值。

(3)动态力学性能测试和 SEM 分析结果表明,SBR-*g*-MAH 能促进白炭黑在 SBR 胶料中的分散,在白炭黑/SBR 复合材料中起相容剂作用;当 SBR/SBR-*g*-MAH 并用比为 50/50 时,复合材料的综合性能最佳。

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## Effect of SBR-*g*-MAH on Properties of Silica/SBR Composite

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**Abstract:** The effect of the addition level of SBR-*g*-MAH on the properties of silica/SBR composite was investigated. The results showed that, as the addition level of SBR-*g*-MAH increased,  $t_{10}$  of the compound was reduced,  $t_{90}$  was extended,  $M_L$  and  $M_H$  increased at first and then decreased. The Shore A hardness, the modulus at 300% elongation and the elongation at break of composite tended to increase, and the tensile strength and tear strength increased at first and then decreased. The dispersion of silica in SBR and their interfacial bonding were improved significantly. When the blend ratio of SBR/SBR-*g*-MAH was 50/50, the comprehensive properties of composite were the best.

**Key words:** SBR; maleic anhydride; graft; silica; compatibility; dynamic property

### 蔚林股份推出稀土系列橡胶促进剂

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濮阳蔚林化工股份有限公司近日推出 LaDC, CeDC, EuDC 和 NdDC 等稀土系列促进剂,目前这些促进剂已形成年产 1 000 t 的生产能力。二硫代氨基甲酸盐类稀土系列产品的推出,将为下游企业提高橡胶制品性能和开发具有独特功能的橡胶制品提供更多可能。

稀土促进剂广泛应于轮胎、胶板、胶鞋鞋底以及其他橡胶制品的生产,可以提高橡胶的加工性能和物理化学性能。与普通促进剂相比,稀土促进剂具有较为平缓的硫化速率。与使用锌盐促进剂相比,使用稀土促进剂的硫化胶具有更高的拉伸强度和拉断伸长率,且耐老化性能也更好。

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