

形逐渐减小。当 RBR/POE 共混比为 60/40、白炭黑用量为 40 份时, RBR/POE TPV 的综合性能优异。

(3) 偶联剂 Si69 改性白炭黑补强 RBR/POE TPV 的 300% 定伸应力和拉伸强度明显提高, 拉伸伸长率和拉伸永久变形明显降低, E' 有小幅提高, 且其 $\tan\delta$ 在高弹态时小于未改性白炭黑补强体系。

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Effects of Silica on Properties of Reclaimed Butadiene Rubber/ Polyolefin Thermoplastic Vulcanizate

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Abstract: The reclaimed butadiene rubber (RBR)/polyolefin (POE) thermoplastic vulcanizate (TPV) was prepared by dynamic vulcanization technology, and the curing characteristics of sulfur curing system and the effect of silica on the physical properties and dynamic mechanical properties of RBR/POE TPV were investigated. The results showed that RBR/POE TPV could be further vulcanized with the sulfur curing system. The modulus at 300% elongation and tensile strength of RBR/POE TPV increased as the addition level of silica increased, while the elongation at break and tensile permanent set decreased. Moreover, the modulus at 300% elongation, tensile strength and storage modulus of RBR/POE TPV filled with Si69 modified silica were higher compared with those of RBR/POE TPV filled unmodified silica, respectively, while the elongation at break and tensile permanent set were lower.

Key words: reclaimed butadiene rubber; POE; TPV; dynamic vulcanization; silica; reinforcement

一种橡胶传输带及用于该橡胶传输带 胶液的组合物配方

中图分类号: TQ336.2 文献标志码: D

由张家港市华申工业橡塑制品有限公司申请的专利(公开号 CN 104016063A, 公开日期 2014-09-03)“一种橡胶传输带及用于该橡胶传输带胶液的组合物配方”, 涉及的橡胶输送带包括第一阻燃层、第一铝箔层、芯层、第二铝箔层和第二阻燃层, 芯层和第一铝箔层之间为磁粉层, 输送带侧边设置有“[]”包边结构, 第一阻燃层上表面有

花纹, 花纹表面有抗紫外线涂料层; 涉及的组合物组分包括天然橡胶、氯丁橡胶、丙烯酸酯橡胶、活化剂、防老剂、炭黑、分散剂、硫黄、硫化促进剂和阻燃剂。抗紫外线涂料层可以延长输送带的寿命; 磁粉层可以使输送带具有吸附磁铁的功能; 铝箔层可以阻隔和防止外界热量、氧化物的侵蚀, 达到阻燃效果; 芯层结构和“[]”包边结构可以防止运输带撕裂; 组合物体系能够达到抗拉伸和阻燃效果, 防止输送带的表面烫坏和燃烧。

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