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Structure and Properties of NR/CPVC Thermoplastic Vulcanizate

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Abstract: The NR/CPVC thermoplastic vulcanizate (TPV) was prepared by dynamic vulcanization method. The physical properties, solvent resistance and microstructure of NR/CPVC TPV filled with NR-g-(GMA-co-St)/silica were investigated. The results showed that, as the addition level of NR-g-(GMA-co-St) and silica were 7 and 3 phr respectively, the dispersion and uniformity of crosslinked NR as the dispersed phase in CPVC matrix were obviously improved, and the interfacial strength between NR and CPVC was significantly increased. Compared with the unmodified NR/CPVC TPV, the tensile strength, tear strength and elongation at break of NR/CPVC TPV modified by NR-g-(GMA-co-St)/silica were increased, and the solvent resistance was improved.

Key words: NR; CPVC; TPV; property; structure

单组分室温硫化氟硅橡胶及其制备方法

中图分类号: TQ333.93; TQ336.4+2 文献标志码: D

由滁州斯迈特复合材料有限公司申请的专利(公开号 CN 102850807A, 公开日期 2013-01-02)“单组分室温硫化氟硅橡胶及其制备方法”, 涉及的单组分室温硫化氟硅橡胶配方为: 羟基封端含氟聚硅氧烷 100, 无机填料 1~30, 交联剂

3~15, 硅烷偶联剂 2~5, 钛酸酯偶联剂 0~3, 催化剂 0.1~0.5, 甲基含氟硅油 0~2。该单组分室温硫化氟硅橡胶具有优良的耐油性和密封粘结性能, 可用于耐燃油的密封(如飞机和汽车油箱密封、油库和油罐车管道的密封), 室温下能固化为弹性体, 加工应用方便, 性能良好。

(本刊编辑部 赵敏)