

### 3 结论

(1) 当酚醛树脂含量达到6%以上时, PP/EPDM TPV的流变曲线为直线, 为稳态流动, 加工性能良好, TPV的硬度变化不明显。

(2) 用挤出法制备的PP/EPDM TPV性能优于用密炼法制备的PP/EPDM TPV, 挤出法螺杆转速以 $450 \text{ r} \cdot \text{min}^{-1}$ 为宜, 在挤出1~3次内, 增加挤出次数可以提高TPV的物理性能。TPV多次挤出加工性能稳定。

(3) SSBR部分替代EPDM并与PP共混制备TPV时, 采用苯乙烯含量低的SSBR可减小TPV的永

久变形, 采用苯乙烯含量高的SSBR能够提高TPV的拉伸强度和硬度。

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## Preparation and Properties of Dynamically Vulcanized PP/EPDM/SSBR Thermoplastic Elastomer

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**Abstract:** The preparation and properties of dynamically vulcanized thermoplastic elastomer (TPV) based on PP, EPDM and SSBR, were investigated. The processing property was greatly influenced by the content of phenolic resin, and the optimized content was 6% of the rubber amount. The performance of the TPV prepared by extrusion was better than that by internal mixer mixing. It was recommended that during the extrusion the screw speed was set at  $450 \text{ r} \cdot \text{min}^{-1}$ , and the compound was extruded 2 or 3 times to ensure good processing property and physical properties. With low styrene SSBR, the TPV showed a lower permanent compression set. With high styrene SSBR, the TPV possessed higher tensile strength and higher hardness.

**Keywords:** dynamically vulcanized thermoplastic elastomer; PP; EPDM; SSBR; extrusion; internal mixer mixing



### 信息·资讯

## 山西阳光华泰炭黑年产能达23万t

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