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## Study on BR Conductive Composite Filled by Graphene

WANG Qing-nian, LIU Yin, TANG Jun-hui, TAO Yong, WANG Xin, HU Hai-qing

(Qingdao University of Science and Technology, Qingdao 266042, China)

**Abstract:** The electrical conductivity and physical properties of BR composites filled with graphene or acetylene carbon black were investigated. The results showed that, the scorch time and optimum curing time of graphene/BR compound were shortened, and the torque increased as the addition level of graphene increased. The percolation threshold of graphene in graphene/BR composite was 5 phr, when the volume resistivity of graphene/BR composite reached  $1.8 \times 10^6 \Omega \cdot \text{cm}$ . The physical properties of BR composite with 7 phr of graphene were quite similar to the BR composite with 50 phr of acetylene carbon black.

**Key words:** BR; graphene; composite; physical property; volume resistivity

### 异戊橡胶行业标准制定工作启动

中图分类号: TQ330.53 文献标志码: D

异戊二烯橡胶(IR)产品行业标准制定工作日前启动。根据国家标准化管理委员会2012年第二批国家标准制修订计划, IR行业标准由青岛伊科思新材料股份有限公司组织制定, 计划于2013年11月完成标准报批稿上报工作。

近几年, 随着天然橡胶(NR)资源的日趋紧缺, 许多使用NR的橡胶制品均通过添加一定比例的IR替代NR, 以降低生产成本, 因此IR的需求量也日益增大。但国内至今尚未制定IR的国

家标准和行业标准。

2010年10月, 青岛伊科思新材料股份有限公司建成国内产能最大的生产装置, 实现IR工业化生产, 其生产的IR已在轮胎、医用胶塞等产品中得到广泛应用。为给IR的科研、生产、质检和外贸提供统一、科学的检验方法和质量判定依据, 促进我国IR质量提升, 规范市场发展, 伊科思公司于2011年上半年向标准化技术委员会合成橡胶分会申请制订IR产品行业标准并获得通过。

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