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收稿日期: 2023-10-17

Effect of Rubber Operating Oil Dosage on Properties of SSBR Compound

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Abstract: The effect of rubber operating oil (referred to as operating oil) dosage on the properties of the compound in the formulation system of solution polymerized styrene butadiene rubber (SSBR) and silica was studied. The results showed that as the dosage of operating oil increased, the Mooney viscosity, F_L and F_{max} of the compound decreased, t_5 and t_{90} prolonged. The Shore A hardness, modulus stress and tensile strength of the vulcanizate decreased, the elongation at break, tear strength and rebound value increased, the wear resistance and cutting resistance decreased, the elastic modulus and viscous modulus decreased, the loss factor at 0 and 70 °C changed little, and the glass transition temperature (T_g) decreased. The Mooney viscosity, scorch time and torque of the SSBR compound and the Shore A hardness, elongation stress, elongation at break, rebound value and T_g of the vulcanizate were highly linearly related to the dosage of operating oil.

Key words: rubber operating oil; SSBR; physical property; wear resistance; cutting resistance; dynamic mechanical property

卡博特2023财年第4财季每股收益增6%

日前, 卡博特公司发布2023财年第4季度和全年财务业绩报告, 公司第4财季调整后每股收益达1.65美元, 同比增长6%, 是2023财年最强劲的季节。

卡博特公司总裁兼首席执行官柯尚恩在评论业绩时表示: “尽管面临主要终端市场需求下降、市场环境疲软以及客户大量去库存等挑战, 2023财年调整后每股收益依然达到5.38美元。通过严格的成本管理和强有力的商业执行, 我们积极应对充满挑战的宏观环境, 保持了公司稳健的利润率。”

财报显示, 2023财年卡博特公司现金表现强劲, 经营活动现金流达5.95亿美元。得益于, 卡

博特公司能够有效维护资产、投资增长性项目并向股东返还现金。此外, 卡博特公司2023年推出的EVOLVE可持续解决方案技术平台, 使公司在可持续发展议程方面取得重大进展。卡博特公司也将为客户提供可持续补强碳材料和其他可持续材料, 以满足客户对提高产品循环性的需求。

柯尚恩表示: “展望2024财年, 我们预计宏观经济环境将颇具挑战, 但仍预计在功能性补强材料业务持续增长的推动下, 2024财年调整后每股收益可达6.30~6.80美元。此外, 在假设原料成本不变的情况下, 预计稳健的息税折旧摊销前利润将推动强劲的运营现金流。”

(摘自《中国化工报》, 2024-01-08)