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## Application of Pyrolysis Carbon Black in Tread Compound of Forklift Tire

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**Abstract:** The application of pyrolysis carbon black (CBp) in the tread compound of forklift tire was studied. The results showed that, when carbon black N550 was equivalently replaced by CBp in the tread compound, the Mooney viscosity of the compound decreased, the Mooney scorch time of the compound was similar as the dosage of CBp was 20 phr, the tensile modulus and tensile strength of the vulcanizate decreased, the elongation at break and tear strength increased, and the dispersion of carbon black decreased. The wear resistance of the vulcanizate with modified CBp was better than that of the compound with unmodified CBp. The production cost could be significantly reduced when carbon black N550 was equivalently replaced by CBp.

**Key words:** waste tire; pyrolysis carbon black; forklift tire; tread compound; wear resistance; physical property; production cost

### 一种用于防爆轮胎气密层的胶料及其制备方法

由四川远星橡胶有限责任公司申请的专利(公布号 CN 111732792A, 公布日期 2020-10-02)“一种用于防爆轮胎气密层的胶料及其制备方法”,公开了一种用于防爆轮胎气密层的胶料,配方为溴化异丁烯-对甲基苯乙烯橡胶 60~100,聚异戊二烯橡胶 0~40,炭黑N660

10~50,白炭黑 0~45,软化剂 3~5,氧化锌 2~5,硬脂酸 1~3,树脂 2~5,均匀剂 1~2,烷基酚二硫化物 0~1,交联剂 0.5~1,促进剂 1.5~2;采用两段混炼工艺。所得胶料炭黑分散度等级高,可稳定控制在7.5以上;透气系数较小;疲劳性能达到140万次无裂纹。成品轮胎静置气压监测每月变化小于2.5%。

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