

- 中国化工装备, 2005 (z1): 296-299.
- [7] 田春燕, 邱磊, 张静. 球磨处理炭黑对PMMA复合材料性能的影响[J]. 塑料科技, 2021, 49 (5): 20-23.
- [8] CHOUNG S, UM W, KIM M, et al. Uptake mechanism for iodine species to black carbon[J]. Environmental Science & Technology, 2013, 47 (18): 10349-10355.
- [9] 陈建, 金永中. 炭黑结构与活性研究[M]. 北京: 科学出版社, 2018.
- [10] WANG M J, WOLFF S, DONNET J B. Filler-elastomer interactions. Part III. carbon-black-surface energies and interactions with elastomer analogs[J]. Rubber Chemistry and Technology, 1991, 64 (5): 714-736.
- [11] 解希铭, 王丽静, 王雷雷. 不同炭黑对溶聚丁苯橡胶性能的影响[J]. 橡胶工业, 2020, 67 (2): 97-103.
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## Application of Different Kinds of Carbon Black in Tire Tread Compound

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**Abstract:** The physicochemical properties and particle size characteristics of different kinds of carbon black were studied, and the influence of different kinds of carbon black on the properties of tire tread compound was discussed from the perspective of particle size. The results showed that, the larger the particle size of carbon black, the smaller the specific surface area and the lower the structure degree. As the particle size of carbon black increased, the Mooney viscosity of the rubber compound was reduced, the crosslinking density decreased, the wear resistance of the vulcanizate was reduced, and the heat build-up decreased. The dispersibility of the carbon black with small particle size, such as carbon black N134, N234 and N220, in the rubber compound was better than that of the carbon black having large particle size, such as carbon black N375 and N550.

**Key words:** carbon black; particle size; tread compound; dispersibility; physical property

### 两大炭黑公司产品价格上调

全球知名炭黑供应商卡博特公司和欧励隆工程炭公司均宣布自2022年8月1日起上调炭黑产品价格。

卡博特公司将提高其补强材料业务部在北美销售的所有炭黑产品的价格, 调价幅度为每吨200~400美元, 具体视产品和包装类型而定。卡博特公司表示, 北美地区轮胎和工业橡胶制品产量增大, 此次涨价有助于解决成本大幅增长的问题, 公司正在对制造网络进行重大投资, 以提高设备的可靠性, 使其即便在开工率较高的情况下也能满足强劲的客户需求。此外, 由于投资环保项目必须满足美国环境保护局对空气排放的控制要

求, 相关生产成本有所上升, 因此从8月1日起还将上调在北美销售的所有炭黑产品的原料附加费。由于油价不寻常上涨和借贷成本增大, 北美地区订单的付款期限定为短于30天。

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