

低,有利于降低胎面胶的滚动阻力,提高轮胎综合性能。

参考文献:

- [1] 卢昌利,欧阳春平,郭志龙,等. 硅烷偶联剂的合成、发展与应用[J]. 广东化工,2020,47(12):105-107.
- [2] 徐溢,滕毅,徐铭熙. 硅烷偶联剂应用现状及金属表面处理新应用[J]. 表面技术,2001,30(3):48-51.
- [3] 潘广丽,董彩丽,于国鸿,等. 加工助剂在白炭黑胎面胶中的应用[J]. 轮胎工业,2004,24(9):535-538.
- [4] 赵菲,黄琪伟,高洪娜,等. 绿色轮胎原材料研究进展[J]. 科学通报,2016,61(31):3348-3358.
- [5] 郭鹏,赵文权,吴刚. 我国绿色轮胎的发展现状[J]. 化工环保,2014,34(4):332-335.
- [6] 王强,董继学,罗建刚,等. 硅烷偶联剂Si747在半钢子午线轮胎胎面胶中的应用[J]. 轮胎工业,2021,41(5):303-305.
- [7] 张皓文,肖建芳,周垒,等. 硅烷偶联剂KH570和CTAB协同改性白炭黑及其应用[J]. 现代化工,2020(3):88-91.
- [8] 方传杰,樊云峰,赵燕超. 硅烷偶联剂在橡胶中的应用研究进展[J]. 橡胶科技,2019,17(3):125-131.
- [9] 刘华侨,顾培霜,朱家顺,等. 新型硅烷偶联剂NXT的应用研究[J]. 橡胶工业,2020,67(5):366-370.
- [10] 刘继,金培玉,朱晓英. 含硫硅烷偶联剂的研究进展[J]. 杭州化工,2019,49(3):1-3,26.
- [11] 王新颖,徐拓,陈海群,等. 聚氨酯/硅烷偶联剂改性氧化石墨烯软泡复合材料性能研究[J]. 塑料科技,2022,50(9):25-29.

收稿日期:2022-12-08

Application of New Silane Coupling Agent in Tread Compound of Passenger Car Radial Tire

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Abstract: The application of a new silane coupling agent in the tread compound of passenger car radial tires was studied. The results showed that the sulfur content of the new silane coupling agent was close to that of silane coupling agent Si75, and the sulfur distribution was close to that of silane coupling agent Si69. Compared with the compound using silane coupling agent Si75, the compound using new silane coupling agent had higher curing efficiency, but its processing safety was relatively poor, the physical properties were equivalent, and the hysteresis loss was lower, which was conducive to reducing the rolling resistance of tread compound and improving the comprehensive performance of the tire.

Key words: silane coupling agent; passenger car radial tire; tread compound; curing characteristic; physical property; dynamic property

2023年日本炭黑总需求或增长3.4%

日前,日本炭黑协会公布了2023年日本国内炭黑需求预测,2023年日本炭黑总需求(包括进出口)将达72.7万t,同比增长3.4%。

该协会表示,这一预测已考虑到新冠疫情的缓和、消费者购买意愿的回升、企业设备投资意愿的增大、出口增加等经济逐步复苏的因素。但市场仍然存在一些难以预测的因素。对炭黑需求预测的前提是,预计2023年日本国内汽车产量将达850.7万辆,同比增长6.7%。日本汽车轮胎协会预计日本国内轮胎需求将同比增长2.5%。此外,日本橡胶工业协会预测,整个橡胶工业的新胶消费

量预计为129.9万t,同比增长3.8%。其中,汽车轮胎和胶管预计为104.1万t,同比增长3.1%;普通橡胶预计为25.8万t,同比增长6.8%。

2023年日本炭黑总需求中,橡胶用炭黑预计为64.175万t,同比增长3.8%,其中轮胎用炭黑47.884万t,同比增长2.9%;普通橡胶用炭黑14.691万t,同比增长6.8%。非橡胶用炭黑预计为4.45万t,同比增长0.6%。国内炭黑需求总计67.025万t,同比增长3.6%。出口炭黑预计为5.7万t,同比增长1.1%,其中橡胶用炭黑1.6万t,同比增长5.6%。进口炭黑预计为13.85万t,同比增长3.4%。

(摘自《中国化工报》,2023-03-27)