

抑烟性能进一步增强。氢氧化镁/氢氧化铝/MP阻燃硅橡胶不仅具有优异的阻燃性能,还能保持良好的物理性能,当复合阻燃剂氢氧化镁/氢氧化铝/MP并用比为12/18/30时,复合硅橡胶的综合性能最佳。

参考文献:

- [1] 贾丽,杨再文,刘华飞,等. 改性 $Mg(OH)_2$ 对脱醇型 RTV 硅橡胶性能的影响[J]. 有机硅材料, 2005, 19(2): 17-19.
- [2] 艾国金,马文石. 氢氧化铝对脱醇型 RTV-1 硅橡胶性能的影响[J]. 有机硅材料, 2007, 21(6): 313-317.
- [3] 张泽江,梅秀娟,冯良荣,等. 三聚氰胺磷酸盐阻燃剂的合成及性能表征[J]. 合成化学, 2003, 11(3): 260-264.
- [4] 赵华,朱志华,于筛成,等. 三聚氰胺磷酸盐的合成及改性研究[J]. 塑料工业, 2009, 37(1): 60-62.
- [5] 窦网琪,王新龙. 电缆/管道贯穿用膨胀性阻燃硅橡胶研究[J]. 有机硅材料, 2010, 24(6): 364-368.
- [6] Ulf Wickström, Ulf Göransson. Full-scale/Bench-scale Corre-

- lations of Wall and Ceiling Linings[J]. Fire and Materials, 1992, 16(1): 15-22.
- [7] 张军,纪奎江,夏延. 聚合物阻燃与燃烧技术[M]. 北京: 化学工业出版社, 2005: 87, 418.
- [8] Costa L, Camino G, Luda Di Cortemiglia M P. Mechanism of Thermal Degradation of Fire-Retardant Melamine Salts[A]. Fire and Polymers[C]. Washington, D C: ACS Symposium Series, 1990: 211-238.
- [9] Camino G, Cost L, Luda Di Cortemiglia M P. Overview of Fire Retardant Mechanisms[J]. Polymer Degradation and Stability, 1991, 33(2): 131-154.
- [10] 佟苟朋,张德平. 常用三嗪系阻燃剂综述[A]. 2008 年全国阻燃学术年会论文集[C]. 北京: 中国阻燃学会, 2008: 145-152.
- [11] Lewin M, Le Bras M, Camino G, et al. Fire Retardancy of Polymeric Materials: The Use of Intumescence[M]. London: The Royal Society of Chemistry, 1999: 1-32.
- [12] 韦震宇,张立群,田明. 硅橡胶阻燃技术研究进展[J]. 合成橡胶工业, 2011, 34(1): 74-80.

收稿日期: 2012-12-01

Preparation and Properties of Magnesium Hydroxide/Aluminum Hydroxide/Melamine Phosphate Filled Flame Retardant Silicone Rubber

LI Xing-jian, ZHANG Yi-heng, SUN Dao-xing

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

Abstract: The magnesium hydroxide/aluminum hydroxide/melamine phosphate(MP) filled retardant silicone rubber was prepared by using α, ω - dihydroxy polydimethylsiloxane, which was prepared by equilibrium polymerization by using alkaline catalyst, and the structure and properties of the flame retardant silicone rubber were investigated. The results showed that, the magnesium hydroxide/aluminum hydroxide/MP flame retardants possessed excellent synergistic flame retardant effect, and the flame retardancy, thermal stability and smoke suppression of silicone rubber composite were improved. The magnesium hydroxide/aluminum hydroxide/MP flame retardant silicone rubber also possessed good physical properties. As the magnesium hydroxide/aluminum hydroxide/MP blend ratio was 12/18/30, the comprehensive properties of the silicone rubber composite was the best.

Key words: silicone rubber; magnesium hydroxide; aluminum hydroxide; melamine phosphate; synergistic effect; dynamic combustion performance

苏州宝化在乌海建设 20 万 t 炭黑项目

中图分类号: TQ330.38⁺1 文献标志码: D

苏州宝化炭黑有限公司的母公司——上海宝钢化工公司与乌海市政府以及内蒙古黄河能源科技集团, 拟共同出资 19.7 亿元建设的炭黑及煤焦油深加工项目已在呼和浩特签约。该项目包括年产 20 万 t 炭黑、60 万 t 煤焦油以及 10 万 t 苯加

氢装置, 工程分两期建设, 预计 2015 年 9 月建成投产。其中一期工程投资 4.7 亿元, 建设 4 万 t 炭黑和 30 万 t 煤焦油加工装置。

目前, 苏州宝化炭黑有限公司拥有 3 个生产基地, 分别设在江苏苏州、四川达州和贵州贵阳, 待乌海基地建成后该公司炭黑总产能可达 50 万 t。

(原中国橡胶工业协会炭黑分会 郭隽奎)