

论文摘要

中国有色金属学报

ZHONGGUO YOUSEJINSHUXUEBAO XUEBAO

第11卷 第1期 (总第40期) 2001年2月

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文章编号: 1004-0609(2001)01-0140-04

金属-橡胶粘合促进剂硼酰化镍的制备及性能

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摘要: 研究了以碳酸镍、硼酸酯和混合羧酸合成新的金属橡胶粘合促进剂硼酰化镍的新方法。系统地考察了各种因素对合成硼酰化镍的影响。以2-乙基己酸和硼酸三丁酯为有机原料合成的硼酰化镍, 通过检测, 与英国Manobond公司产品680 C比较, 二者红外光谱数据、300%定伸强度、拉伸强度、硬度和硫化曲线非常接近, 而拉断伸长率、热空气老化的粘合性能则前者稍低。实验表明, 制备的硼酰化镍可用作金属橡胶粘合促进剂。

关键字: 硼酰化镍; 金属-橡胶粘合促进剂; 碳酸镍; 硼酸酯

Preparation and properties of nickel borate acylate

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Abstract: The synthetic method for nickel borate acylate (NBA), a kind of rubber-steel cord adhesion promoter, through nickelous carbonate borate and mixed carboxylic acids was studied, and many factors influencing the synthesis of NBA were investigated systematically. By detection and comparison with product 680 C from Manobond Company of England, the NBA synthesized through isooctanoic acid and tributyl borate is very similar with product 680 C in IR data, 300% fixed extension strength, tensile strength, hardness and cure curve, and is a little lower than product 680 C in tensile failure extensibility and hot air aging. The experimental results show that the prepared NBA can be used as rubber-steel cord adhesion promoter.

Key words: nickel borate acylate; rubber-steel cord adhesion promoter; nickel carbonate; borate

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