

基于天然聚多糖的环境友好材料 (II) -麻纤维和芦苇纤维多元醇的生物降解聚氨酯

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摘要 以麻纤维和芦苇纤维制备的植物多元醇为原料,合成具有良好性能的生物降解性硬质聚氨酯泡沫体,其密度40 kg/m³左右,压缩强度150 kPa,弹性模量4 MPa。而且多元醇中植物原料含量越大,其性能越好,这使植物原料的充分利用和材料生产成本的降低成为可能。土壤掩埋实验表明,泡沫体有很好的土壤微生物降解性。

关键词 [麻纤维](#) [纤维](#) [聚氨酯](#) [泡沫材料](#) [弹性模量](#) [生物降解](#)

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Environmental-Friendly Materials Based on Natural Polysaccharides (II)-Biodegradable Polyurethane Foams from Biomass Polyols of Banknote Paper and Pulp Paper

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Abstract Some properties of the biomass polyols from liquefactions of banknote paper (BP) and pulp paper (PP), and the application of these polyols to the preparation of polyurethane foam have been studied. Rigid polyurethane foams have been prepared successfully from the biomass polyols. The foams have densities of about 40 kg/m³, compressive strengths of 150 kPa, and elastic modulus of 4 MPa, being comparable to those of conventional rigid polyurethane foams. The biomass composition in biomass polyol has significant influence on the properties of the resulting foams. Furthermore, the foams were found, to some extent, biodegradable.

Key words [BAST FIBRE](#) [FIBERS](#) [POLYURETHANE](#) [FOAM MATERIALS](#) [MODULUS OF ELASTICITY](#) [BIOLOGICAL DEGRADATION](#)

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