

Title (en)  
HARD THERMOPLASTIC POLYURETHANE ELASTOMERS.

Title (de)  
HARTE THERMOPLASTISCHE POLYURETHANELASTOMERE.

Title (fr)  
ELASTOMERES THERMOPLASTIQUES DURS EN POLYURETHANE.

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Application  
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Abstract (en)  
[origin: WO9324549A1] This invention relates to a method of fabricating a thermoplastic elastomer which comprises the steps of: (a) fabricating a polyol blend having a desired polydispersity and comprising a first polyol and a second polyol, a diisocyanate, and a difunctional, isocyanato-reactive chain-extender, the first polyol being prepared utilizing a double metal cyanide complex catalyst and having a molecular weight of between about 1,000 and about 5,000, said first polyol having an end group unsaturation level of no greater than 0.04 milliequivalents per gram of polyol, the second polyol being a polyether polyol having an average molecular weight of between about 1,000 and about 20,000, (b) reacting said polyol blend with a diisocyanate to produce an isocyanate-terminated prepolymer, and (c) reacting said isocyanate-terminated prepolymer with a difunctional isocyanato-reactive chain extender in a mold or in an extruder in order to produce a hard elastomer characterized by a hardness of between a 75 Shore A and about a 75 Shore D. Also claimed is the elastomer produced by the above method utilizing a one-shot technique.

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