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(54) Title: THERMOPLASTIC POLYURETHANE COMPOSITIONS

(57) Abstract: The present invention relates to thermoplastic polyurethane (TPU) compositions with appropriate biostability and superior resistance to environmental stress cracking. The TPU compositions comprise the reaction product of: a) a polyisocyanate comprising at least 50 wt.% based on the total weight of the polyisocyanate component of (i) an aliphatic diisocyanate having from 6 to 10 carbon atoms; b) a polyol comprising at least a hydroxyl-terminated poly(butadiene); and, c) a chain extender comprising at least one diol chain extender; wherein the thermoplastic polyurethane composition has a hard segment of from 22 to 65 wt.% based on the total weight of the composition. The TPU compositions are suitable for the manufacturing of medical devices.