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(54) Title: IMPROVED POLYMER-GRAFTED COTTON FIBERS AND PRODUCTS

(57) Abstract: A solution for forming a graft substrate containing a graft initiator, a catalyst for activating the graft initiator, a polymerizable silicon-containing material, and at least two additional prepolymers, each of the silicon-containing material and the prepolymers which includes a functional group for reaction with an activated site on the substrate for grafting a copolymer thereto or with an activated site on the grafted copolymer. The treated fiber exhibits excellent crockfastness, color fastness, and abrasion resistance, strength, and has a soft hand. The composition is optimized for printed and unprinted cotton and poly-cotton. In one embodiment, the treated cotton is stretchable and resilient. In another embodiment method of printing on cotton is included.



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