変性シリコーン処理による綿平織布間の静摩擦力の変化について

Effects of Finishing with the Modified Polysiloxane on the Static Frictional Force of Plain Weave Cotton Fabrics.

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Plain cotton fabrics were finished with modified polysiloxanes, which were prepared by heating a mixture of cyclic dimethylsiloxane, cyclic N-(2-aminoethyl)-γ-aminopropylmethylsiloxane, decamethyltetrasiloxane and a catalyst. The static frictional force between two specimens of the same finished fabrics was measured to investigate the effect of amino group in the modified polysiloxanes on the surface characteristic of fabrics. The static frictional force decreased as the concentration of finishing solution increased, and became constant above 0.5wt% in a similar manner as polydimethylsiloxane. The static frictional force of fabrics treated in 1wt% treating solution showed the minimum value as the content of N-(2-aminoethyl)-γ-aminopropylmethylsiloxane portion (amino portion) in the modified polysiloxane increased. Judging from the measurement of the static frictional force for the fabrics treated with the mixture of polysiloxanes, it was found that the influence of modified polysiloxane on the static frictional force became stronger as the content of amino portioninin the modified one increased.

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