Our present invention relates to a process for improving artificial silk fabrics and more particularly to a process for bettering the resistance of such products to mechanical strain.

Artificial silk fabrics frequently have the defect that in dry and wet condition there is a shifting of the warp and weft threads. In wet condition viscose artificial silk fabrics must be handled with special care because owing to their depressed tenacity they are likely to suffer injury. Although processes are known which ensure the resistance of dry artificial silk fabrics to this shifting phenomenon, the like success has not been attained in the case of wet artificial silk fabrics.

By this invention the resistance of artificial silk products, particularly loosely woven viscose artificial silk fabrics, to mechanical strain is improved by subjecting them to a preliminary treatment with an amine derived from a resin acid of high molecular weight and containing a guanidine residue or a group derived from guanidine. Such cation-active substances have a certain affinity for artificial fibers and adhere to them throughout any wet treatment, imparting a durable resistance to shifting and an increased wet tenacity. Such compounds are, for instance, derivatives of abietinylamine of the formula

$$(\text{CH}_2)_2\text{CH}((\text{CH}_2)_2\text{C}_6\text{H}_4\text{CH}_2\text{NH}_2)$$

such as abietinylguanidines and abietiny lureides, abietinylbiguanides and alkylated or hydroxyalkylated derivatives thereof. These products are produced according to known processes by condensing, for instance, abietinylamine with chlorocarbonic acid esters and after-treatment with ammonia or by heating the chlorhydrate of the base together with dicyandiamide to 150 to 155°C. The corresponding hydroxyalkylated products are produced by treating the biguanides or ureides with ethylene oxide, its homologous compounds or equivalent compounds at a temperature of about 140°C if desired in the presence of catalytic acting agents, such as caustic alkalis or alkali metal alcoholates; the alkylated products are made in the known manner by a treatment with, for instance, dimethyl sulfate.

For example, a viscose artificial silk fabric is treated in a liquor ratio of 1:30 with a solution of 3 grams of abietinyl biguanide hydrochloride per liter at 40°C for half an hour and then squeezed. The fabric thus treated is fast to shifting and has an improved wet tenacity.

In an analogous manner the other products of the group mentioned above, are applied.

What we claim is:

A process for improving artificial silk fabrics which comprises treating them with a derivative of abietinylamine of the group consisting of the ureides, guanides and biguanides of abietinylamine, and alkylated and hydroxyalkylated derivatives of said ureides, guanides and biguanides.

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