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the untreated control "Orlon" fabric retained a grayish color and is difficult to wash clean.

Example 3

A glass fiber cloth made of spun glass fibers and scoured free of sizing agent is immersed for several minutes in a dispersion of fibrous boehmite prepared as in Example 2.

Then, the treated fabric is rinsed several times in water. The moist glass fabric is immersed for several minutes in about 20 times its weight of an aqueous solution containing 5% by weight of the mixed monomers of 2-vinylbenzenesulfonic acid and 4-vinylbenzenesulfonic acid.

The fabric is rinsed with water and then is quickly dipped into about 10 times its weight of a 0.1% by weight solution of ammonium persulfate and 0.05% by weight sodium bisulfite. The fabric is then dried at 70-100° C. in an air circulating oven until thoroughly dried.

The treated fabric has a smoother, softer hand than the untreated glass fabric. The untreated fabric is also more brittle than the treated fabric, as shown by repeated flexing of each fabric.

Example 4

This example illustrates the use of fibrous boehmite alumina as an anchoring agent for vinylbenzene sulfonic acid in bonding a polyester resin to glass fiber cloth. A Type 181 glass fabric cloth is dipped into a 0.25% sol of fibrous boehmite prepared as described in Example 2 and then thoroughly dried at 110° C. This treated glass cloth is then dipped into a 0.5% solution of vinyl benzenesulfonic acid, removed, and again thoroughly dried at 110° C. A 12-ply laminate lay is made according to military specification MILF-9118 using selectron 5003 polyester resin marketed by Pittsburgh Plate Glass Co.

This application is a continuation-in-part of my co-

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pending application Serial No. 730,023, filed April 21, 1958, now abandoned.

The claims are:

1. A fibrous substrate bearing a basecoat of alumina particles said alumina particles being less than 1.5 microns in largest average dimension and having an average specific surface area of at least 10 square meters per gram and a topcoat of an organic polymer containing sulfonic acid radicals, said organic polymer having a molecular weight of at least 500 and having at least 1 weight percent of lateral free sulfonic acid radicals, and said fibrous substrate being a material which, without the alumina base coat, is negatively charged with respect to the alumina particles.
2. The product of claim 1 wherein the alumina is a fibrous boehmite.
3. The product of claim 1 wherein the alumina is an amorphous gel.
4. The product of claim 1 wherein the alumina is a gamma alumina produced by thermal hydrolysis.
5. The product of claim 1 wherein the fibrous substrate is a polyamide.
6. The product of claim 1 wherein the fibrous substrate is a poly(ethylene-terephthalate).
7. The product of claim 1 wherein the fibrous substrate is a polyacrylonitrile.

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