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(54) **FLOCKED FABRIC**

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(57) **ABSTRACT**

A flocked fabric having a woven fabric substrate of a blend of microdenier polyester and pima cotton. The fabric substrate is covered with an adhesive, and flock is attached to the fabric substrate by the adhesive.

FLOCKED FABRIC

BACKGROUND

[0001] The present invention relates to flocked fabrics and the components forming such fabrics.

[0002] Flocked fabrics generally comprise a cloth, which has been coated by an adhesive and fine fibers applied over the adhesive. The resultant cloth has a velvet like appearance. These fabrics can be used in many applications, such as for upholstery in home furnishings. Typically, the flocking substrate fabric is an osnaburg fabric. An osnaburg fabric is a plain weave that is medium to heavy in weight, and is a coarse fabric often formed partially of waste fiber. However, there is a need for improved flocking substrate fabrics, and improved flocked fabrics using such substrates.

DETAILED DESCRIPTION

[0003] The present invention generally relates to flocked fabrics formed from a flocking substrate fabric, which has been coated with an adhesive and subsequently coated with flock. The flocked fabric of the present invention can be used for many applications, such as upholstery for home furnishings.

[0004] The flocking substrate fabric can be a woven fabric (such as plain, twill, satin, dobby, jacquard, leno, or the like) or a knit fabric (such as weft knit or warp knit). In one embodiment, the flocking substrate fabric is formed of spun yarns containing a blend of microdenier polymer fibers and natural fibers. What is meant by microdenier fiber is a fiber of less than one (1) denier per filament. It is believed that the combination of microdenier polymeric fibers and cellulosic fibers provide a less rigid fabric and a better surface for the bonding of the adhesive. The yarns can be open-end spun, ring-spun, air-spun, or any other spinning technology.

[0005] In a preferred embodiment of the present invention, the microdeiner polymeric fibers are a microdenier staple fiber of polyester. Also, in one embodiment the cellulosic fibers are a cotton, such as pima cotton. Pima cotton is a higher cost material that is not associated in the industry with the lower quality and cost of the materials used in present flocking substrate fabrics.

[0006] In one embodiment, the blend of materials forming the flocking substrate fabric is about 65% microdenier polymeric fibers (such as polyester) with about 35% cellulosic fibers (such as cotton), by weight. In another embodiment, the blend of materials is about 85% microdenier polymeric fibers (such as polyester) with about 15% cellulosic fibers (such as cotton), by weight. It is anticipated that the blend of materials, by weight, can range from about 90% microdenier polymeric fibers (such as polyester) with about 10% cellulosic fibers (such as cotton), to about 50% microdenier polymeric fibers (such as polyester) with about 50% cellulosic fibers (such as cotton).

[0007] The yarns are typically a yarn with a cotton count of between about 12 and about 25, with about a 15 cotton count being one potentially preferred embodiment. Where yarns of about a 12 cotton count are used in a plain weave, the weave pattern can range from about 28 ends/inch by about 25 picks/inch to about 40 ends/inch by about 32 picks/inch. Where yarns of about a 25 cotton count are used in a plain weave, the weave pattern can range from about 35 ends/inch by 32 picks/inch to about 45 ends/inch by about 42 picks/inch. Where yarns of about a 15 cotton count are used in a plain weave, the weave pattern can range from about 28 ends/inch by about 28 picks/per inch to about 38 ends/inch by about 44 picks/inch, and preferably are about 32 ends/inch by about 28 picks/inch. The weight of the flocking substrate fabric can range from about 2 oz/yd^2 to about 4.5 oz/yd^2, and in one embodiment is preferably from about 3.0 oz/yd^2 to about 3.8 oz/yd^2.

[0008] The adhesive is applied to the flocking substrate fabric prior to applying the flock. In one embodiment, the adhesive is a latex adhesive applied to the flocking substrate fabric.

[0009] The flock is fibers having a denier range from about 0.8 to about 3.0 denier, with an average denier of about 1.1. The flocking fibers can have a length from about 0.025 inches to about 0.07 inches. The flock is applied to the flocking substrate fabric after application of the adhesive. The flock can be applied by mechanical or electrostatic means. The flock will then adhere to the portion of the flocking substrate fabric which has been coated with the adhesive.

What is claimed is:

1. A flocked fabric including:

a woven fabric substrate comprising from about 50% to about 90% by weight of polymeric microdenier fibers and from about 10% to about 90% by weight of cellulosic fibers, including substrate yarns having a size of from about 12 cotton count to about 25 cotton count, having an end count of from about 28 ends/inch to about 45 ends/inch and a pick count of from about 25 picks/inch to about 42 picks/inch, and having a weight of from about 2 oz/yd^2 to about 4.5 oz/yd^2;

an adhesive disposed on the fabric substrate; and,

flock adhered to the fabric substrate by the adhesive.

2. The flocked fabric according to claim 1, wherein the cellulosic fibers comprise cotton.

3. The flocked fabric according to claim 1, wherein the cellulosic fibers comprise pima cotton.

4. The flocked fabric according to claim 1, wherein the polymeric microdenier fibers comprise polyester microdenier fibers.

5. The flocked fabric according to claim 4, wherein the cellulosic fibers comprise cotton.

6. The flocked fabric according to claim 5, wherein the fabric substrate comprises about 65% by weight of the polyester microfiber and about 35% by weight of the natural fibers.

7. The flocked fabric according to claim 5, wherein the fabric substrate comprises about 85% by weight of polyester microfiber and about 15% by weight of the natural fiber.

8. The flocked fabric according to claim 1, wherein the substrate yarns further have a size of about 15 cotton count.

9. The flocked fabric according to claim 7, wherein the fabric substrate further includes an end count of from about 28 ends/inch to about 38 ends/inch.

10. The flocked fabric according to claim 7, wherein the fabric substrate further includes a pick count of from about 28 picks/inch to about 44 picks/inch.

11. The flocked fabric according to claim 1, wherein the fabric substrate further comprises a weight of from about 3 oz/yd^2 to about 3.8 oz/yd^2.

12. The flocked fabric according to claim 1, wherein the substrate yarns are further open-end spun yarns.

13. The flocked fabric according to claim 1, wherein the substrate yarns are further ring spun yarns.

14. The flocked fabric according to claim 1, wherein the substrate yarns are further air spun yarns.

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