BAMBOO... Newest Upholstery Fiber, But How Natural?

Bamboo, the Chinese symbol of longevity, has been used for thousands of years as a source for food, flooring, walls, musical instruments, paper— and more! Few natural materials can rival its versatility.

Because it grows so tall, many people think that bamboo is a tree. However, bamboo is actually a grass which reproduces itself very quickly. Some plants can grow to more than 100 feet tall and new shoots on the larger species can grow three feet in one day!

Bamboo can be grown in many climates. While most of the world’s production comes from China, bamboo is also found in most tropical environments and even in temperate mountain zones. It is also grown commercially in some of the warmer parts of the U.S.

Bamboo Textiles
In the last five years, bamboo has gained popularity as a textile fiber used mostly in the apparel industry. It is often blended with cotton to make lightweight knit fabrics for t-shirts and other items. As more manufacturers have noticed the marketing potential in this new “green” fiber, other apparel uses have followed.

Now bamboo yarns are being incorporated into the latest upholstery fabric offerings. These fabrics blend bamboo with other fibers such as cotton and silk. Less common are the fabrics of 100% bamboo, such as the one shown below.

Heavily Hyped
Because bamboo replenishes itself quickly and because it is a “tough” plant that can be grown in many different climates without a lot of pesticides, bamboo frequently is touted as the ultimate “green” material.

It is true that the plant matures quickly and is easily regenerated from an underground root system that remains after harvesting. Like other natural fibers, it is also more readily biodegradable than synthetics such as nylon and olefin.

Still, before declaring bamboo completely eco-friendly, it is important to know and understand how the raw material is processed into a finished yarn, usable for weaving. Many of those methods require a lot of chemical processing.

Shades of Green
There are several different ways in which bamboo fibers can be manufactured into yarns. The simplest way is to separate the raw fibers from the plant, clean them, and process them in much the same way as linen is produced. However, this process yields a fairly coarse yarn that is somewhat limited in its uses. This method is not nearly as popular as others that produce a softer fiber.
Most bamboo yarn produced today is chemically manufactured by dissolving the plant material in very strong solutions of sodium hydroxide (lye) and carbon disulfide. After several more steps, the resulting liquid solution is forced through spinneret nozzles into diluted sulfuric acid, hardening the thin strands into solid fibers.

This process is identical to the viscose process most commonly used to produce rayon. Bamboo yarns manufactured by this process are sometimes called “bamboo rayon.”

Acetate is another synthetic fiber that can be produced using bamboo as the starting material. This process also uses solvents and reforms the fibers through spinnerets.

The most environmentally friendly manufacturing method for regenerated bamboo fibers is the lyocell process. The solvent spinning technique for lyocell is simpler and more environmentally sound, since it uses a non-toxic solvent chemical that is later recycled.

To our knowledge, the lyocell process that produces such well-known branded fibers as “Tencel” is not being utilized for bamboo at this time. (The starting material for Tencel is hardwood pulp.)

The Bottom Line
The bamboo fibers being used in today’s textiles are lustrous, smooth and attractive. Their environmental impact is somewhat hard to gauge because of the limited information available. It would seem that virtually all bamboo-containing fabrics that present a rayon or silk-like appearance are regenerated fibers, most likely created using the viscose process previously described.

Bamboo fabrics should be carefully tested before any type of cleaning or spotting procedure is used on them.

These fabrics will probably require the same type of care as rayon.

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