



Bamboo Fibre Factsheet

What is bamboo fibre?

Bamboo fibre is a natural textile made from the pulp of the bamboo grass. Bamboo fabric has been growing in popularity because it has many unique properties and is more sustainable than most textile fibres. Bamboo fabric is light and strong, has excellent wicking properties, is very soft and can be worn directly next to the skin. Many people who experience allergic reactions to other natural fibers do not complain of this issue with bamboo. In addition, bamboo fabric has insulating properties and will keep the wearer cooler in summer and warmer in winter and the fabric is able to take bright dye colors well. Bamboo fabric is favoured by companies trying to use sustainable textiles, because the bamboo plant is very quick growing and does not usually require the use of pesticides to thrive. As a result, bamboo plantations can easily be kept organic and replanted yearly to replenish stocks.

Are chemicals used in the processing of bamboo fibre?

Yes, and anyone that claims otherwise is giving a false picture. There are two ways of making bamboo fibre - one produces a type of viscose fabric and the other processes the bamboo mechanically to produce a type of linen fabric. The main chemical used in the processing of bamboo to make bamboo viscose is sodium hydroxide (caustic soda). This is exactly the same chemical that is used in the processing of organic cotton. Sulphuric acid and carbon disulfide are also used. Although sodium hydroxide and sulphuric acid are unpleasant chemicals, when they react together a neutralisation reaction occurs and the products are sodium sulphate salt and water which are both non-hazardous. The chemicals are used in a controlled environment inside the factory and many factories use a closed-loop process meaning the chemicals are not allowed to escape into the environment. Most bamboo viscose fibre is certified by Oeko-Tex Standard 100 - an international testing and certification system for textiles, limiting the use of certain chemicals. The mechanical method of processing only uses about 10% of the chemicals used in the viscose method so is better for the environment, but this fabric (called bamboo litrax) is not yet widely available.

What dyes are used?

Bamboo fibre is usually dyed using reactive dyes which do not require the use of toxic mordants. Since the dyes are colourfast, they will not bleed into wash water, leading to a reduction in dye-laden water runoff, which can be harmful for the environment.

What are the benefits of bamboo fibre over conventional cotton?

One of the great things about bamboo is that the fabric is extremely soft and comfortable to wear, much softer than cotton. Although chemicals are still used in the processing of bamboo fibre, the chemicals are used inside the controlled environment of the factory and bamboo grows without the need for pesticides, insecticides and fertilisers. Cotton is considered the world's 'dirtiest' crop due to its heavy use of insecticides, the most hazardous type of pesticide to human and animal health. Cotton covers 2.5% of the world's cultivated land yet uses 16% of the world's insecticides, more than any other single major crop. The pesticides sprayed onto conventional cotton are used out in the open rather than in the controlled environment of a factory, and according to the World Health Organisation there are 20,000 deaths a year from pesticide poisoning, many of those attributed to cotton farming. The Environmental Protection Agency considers seven of the top 15 pesticides used on cotton in 2000 in the United States as "possible," "likely," "probable," or "known" human carcinogens.

Bamboo also grows extremely quickly (it is the fastest growing plant in the world), needs less water to grow than cotton, takes in more carbon dioxide and releases more oxygen than cotton plants (helping in the fight against global warming) and has a higher yield reducing the pressure on land use. A mature Moso bamboo stand (the species used to produce textiles) has an average yield of 139,000 Kg per hectare. Compare that to cotton which yields an average of 845 Kg per hectare. You can see why bamboo is considered so sustainable with a 60% higher yield, no need for pesticides, lower water consumption and better carbon dioxide absorption. There is currently over 31 million hectares of land under conventional cotton using 30 million Kg of pesticides each year. For every 100 thousand hectares of this land converted to bamboo, hemp or organic cotton, we eliminate about 100 thousand Kg of pesticides, reduce green house gas output by approximately 2 million Kg and save lives.