



Bamboo

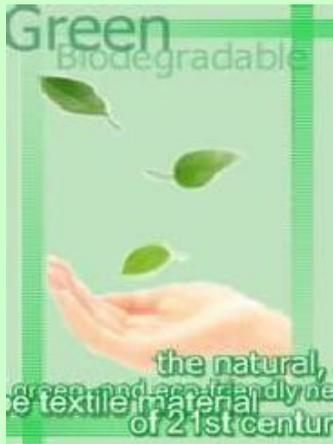
Yarns & Fibers





Green & Biodegradable

As a regenerated cellulose fiber bamboo fiber is 100% made from bamboo through a high-tech process. The raw material bamboo is well-selected from non-polluted regions in Yunnan and Sicuan Province, China. They are all 3-4 year old new bamboo, of good character and ideal temper. The whole distilling and production process is a relatively green process without pollution. The supplier company manufactures bamboo fiber strictly according to ISO 9000 and ISO 14000.



More important, bamboo fiber is a unique biodegradable textile material. As a natural cellulose fiber it can be 100% biodegraded in soil by microorganisms and sunshine. The decomposition process does not cause any pollution in the environment.

"Bamboo fiber comes from nature and completely returns to nature in the end"

Bamboo fiber is praised as "the natural, green and eco-friendly new-type textile material of 21st century".





Natural anti-bacteria

It is a common fact that bamboo can thrive naturally without using any pesticide. It is seldom eaten by pests or infected by pathogens. Why?

Scientists found that bamboo owns a unique anti-bacteria and bacteriostatic bio-agent named "bamboo kun". This substance is combined with bamboo cellulose during the process of being manufactured into bamboo fiber.

Bamboo fiber has particular and natural functions of anti-bacteria, bacteriostatic and deodorization. It is validated by Japan Textile Inspection Association that even after fifty times of washing bamboo fiber fabric still possesses excellent function of anti-bacteria. Its test result shows over 70% elimination rate after bacteria being incubated on bamboo fiber fabric.

Bamboo fibers' natural anti-bacteria function differs greatly from that of chemical antimicrobials. The latter often tend to cause skin allergy when added to apparel.





Bamboo fiber gives your skin a chance to breath free

What is notable of bamboo fiber is its unusual ability to breathe and its coolness. Because the cross-section of the bamboo fiber is filled with various micro-gaps and micro-holes, it has much better moisture absorption and ventilation.

With this unparalleled micro-structure, bamboo fiber apparel can absorb and evaporate human sweat in a split second. Just like breathing, such garments make people feel extremely cool and comfortable in the hot summer.



It is never sticking to skin even in hot summer. According to authoritative testing figures, apparels made from bamboo fibers are 1-2 degrees lower than normal apparels in hot summer. Apparel made from bamboo fiber is crowned as Air Conditioning Dress.

Experience unparalleled advantages of bamboo fiber!





Physical Parameters of bamboo fiber

Testing conditions: temperature : 20°C, relative humidity: 65%

Item		Reference data
Dry tensile strength	(cN/dtex)	2.33
Wet tensile strength	(cN/dtex)	1.37
Dry elongation at break	%	23.8
Linear density percentage of deviation	%	-1.8
Percentage of length deviation	%	-1.8
Over length staple fibers	%	0.2
Over cut fibers	(mg/100g)	6.2
Residual sulfur	(mg/100g)	9.2
Defects	(mg/100g)	6.4
Oil-stained fibers	(mg/100g)	0
Coefficient of dry tenacity variation (CV)	%	13.42
Whiteness	%	69.6
Oil content	%	0.17
Moisture regain	%	13.03
Rate		Grade A



Inspection of Prohibited Substance Content 1

Inspection item	Accepted level	Unit	Results	Conclusion
First category: 15 kinds of prohibited aroma amine				
4-amido biphenyl	20	mg/kg	Undetected	Eligible
biphenyl amine chlorine	20	mg/kg	Undetected	Eligible
4-chlorin toluole amine	20	mg/kg	Undetected	Eligible
2&amine	20	mg/kg	Undetected	Eligible
amido azote toluole	20	mg/kg	Undetected	Eligible
2-amido-4-nitryl toluene	20	mg/kg	Undetected	Eligible
chlorobenzene amine	20	mg/kg	Undetected	Eligible
2,4 one/two amino benzene ether	20	mg/kg	Undetected	Eligible
4,4' one/two amido two benzene firedamp	20	mg/kg	Undetected	Eligible
3,3' one/two chlorine aniline	20	mg/kg	Undetected	Eligible
3,3' one/two oxygen biphenyl	20	mg/kg	Undetected	Eligible
3,3' one/two oxygen biphenyl	20	mg/kg	Undetected	Eligible
2 oxygen biphenyl	20	mg/kg	Undetected	Eligible
4,4' cymene chlorobenzene	20	mg/kg	Undetected	Eligible
toluene amine	20	mg/kg	Undetected	Eligible





Inspection of Prohibited Substance Content 2

Inspection item	Accepted level	Unit	Results	Conclusion
Second category: extractive toluene weight				
As	1.0	mg/kg	<0.2	Eligible
Pb	1.0	mg/kg	0.78	Eligible
Cd	0.1	mg/kg	Undetected	Eligible
Cr	2.0	mg/kg	Undetected	Eligible
Co	4.0	mg/kg	Undetected	Eligible
Cu	58.0	mg/kg	Undetected	Eligible
Ni	4.0	mg/kg	0.11	Eligible
Hg	0.02	mg/kg	<0.02	Eligible
Third category: formaldehyde content (rule 112) Eligible				
formaldehyde	300	mg/kg	4.0	Eligible





Capillary Effect, Rupture Strength, and Rupture Protraction

Sample	Bamboo fiber material	Number	1 pc
type	Bamboo fiber decorating fabric		
Date	Oct.31,2002	Finishing Date	6 Jan,2003
Inspection item's guideline	Capillary effect: FZ/T 01071-1999 quantitative analysis : FZ/T 01057.3-1999 Rupture strength /protraction : 3923.1-1997		
Results			
Inspection Item			Result
Capillary effect (cm/30min)	Warp		7.8
	Weft		5.7
Rupture strength (N)	Warp		1010
	Weft		455
Rupture protraction (‰)	Warp		21.5
	Weft		15.5
Quantitative analysis	100% bamboo fiber		





Color Fastness

Inspection item	Accepted level	Unit	Results	Conclusion
fastness against washing				
Fading	4	Level	4-5	Eligible
Stained with color	4	Level	4-5	Eligible





The End-use of Bamboo Fiber 1

Bamboo fabrics are made from pure bamboo fiber yarns which have excellent wet permeability, moisture vapor transmission property, soft hand, better drape, easy dyeing, splendid colors. It is a newly founded, great prospective green fabric.

Bamboo intimate apparels include sweaters, bath-suits, mats, blankets, towels have comfortable hand, special luster and bright colors, good water absorbance.

Bamboo fiber has a unique function of anti bacteria, which is suitable to make underwear, tight t-shirt and socks. Its anti-ultraviolet nature is suitable to make summer clothing, especially for the protection of pregnant ladies and young children from damages of ultraviolet radiation.

Bamboo non-woven fabric is made by pure bamboo pulp, which has similar properties as viscose fibers have. However, bamboo has wide prospects in the field of hygiene materials such as sanitary napkin, masks, mattress, food-packing bags due to its anti-bacteria nature.





The End-use of Bamboo Fiber 2

Bamboo sanitary materials include bandages, masks, surgical clothes, nurses wears and so on. The bamboo fiber has a natural effect of sterilization and bacteriostasis and therefore it has incomparably wide foreground on application in sanitary material such as sanitary towels, gauze mask, absorbent pads, food packing and so on. In the medical scope, it can be processed into the products of bamboo fiber gauze, operating coat and nurse dresses etc. Because of the natural antibiosis function of the bamboo fiber the finished products need no adding of any artificial synthesized antimicrobial agent. Therefore bamboo fiber products will not cause skin allergies and at the same time it has a competitive advantage in the market.

Bamboo bathroom series enjoy good moisture absorption, soft feel and splendid colors as well as anti bacteria property which are very popular in home textiles. Bamboo towels and bath robes have a soft and comfortable hand feeling and excellent moisture absorption function. Its natural antibiosis function keeps bacterium away so that it will not produce bad odor.





The End-use of Bamboo Fiber 3

Bamboo decorating series have the functions of antibiosis, bacteriostasis and ultraviolet-proof. They are very advantageous for utilization in the decorating industry. Along with the badly deterioration of atmosphere pollution and the destruction to the ozonosphere ultraviolet radiation rays are more and more becoming a problem for human beings. Long time exposure to ultraviolet radiation will cause skin cancer. Wallpapers and curtains made from bamboo fiber can absorb ultraviolet radiation in various wavelengths thus they lessen the harm to the human body. More important, bamboo decorating products will not go moldy due to damp. Curtains, television covers, wall papers and sofa slipcovers can all be made from bamboo fibers.





Dyeing and Finishing of Bamboo Textile

Light sergeing, enzyme de-sizing, moderate bleaching and semi-mercerizing should be applied to the bamboo fabric during its dyeing and finishing process. Avoid drastic conditions and use small mechanical tension.

Sergeing : moderate condition

De-sizing: should be consolidate, de-sizing rate should be over 80%.

Scouring: pure bamboo normally need no scouring, sometimes wash it with a little alkaline soap. The scouring process should be made in terms if fiber blended contains cotton. When pure bamboo fabrics are scoured, the alkali should not be over 10g/liter but be applied in accordance with the thickness of fabrics.

Bleaching: the processing should be made in terms of the specification and thickness of fabrics.

Mercerizing: the fabrics of bamboo fibers normally should not need mercerizing due to their sound luster and bad anti-alkaline properties. However, some cases are found in order to increase their absorbance capacity to dyestuff.

Dyeing : Ideally use active dyestuffs during dyeing process - alkali should not be over 20g/liter, temperature should not be over 100°C. During drying process, low temperature and light tension are applied.

Yarn dyeing: the alkali should not be over 8g/l in yarn-dyeing,.

The above mentioned data are just for your reference and without our responsibility - you may need to adjust them according to the final product you want to obtain

