



上海霓尚实业有限公司
SHANGHAI NISHANG INDUSTRY CO.,LTD.



Bamboo Brief Intrucduction

TENBRO bamboo fiber was 100% made from bamboo that selected from non-polluted region in Sichuan Province, China.

Bamboo can grow as much as 3 feet over night .Because bamboo is a fast growing renewable resource it can replace cotton, wood ect.. TENBRO Bamboo fiber is biodegradable textile material. It can be 100% biodegraded in soil by microorganism and sunshine. The decomposition process doesn't cause any pollution to environment

Tenbro Bamboo Fiber Functions

Green&Bidegradable

Shanghai Tenbro has always been paying great attention to environmental protection of its products. We have done a lot in protecting environment, pursuing social value as well as economic value, which is in accordance with our most important business philosophy

Bamboo Resource

TENBRO bamboo fiber is made from well-selected non-polluted bamboo in Sichuan Province For strictly controlling the quality of raw material, Shanghai Tenbro has built its own bamboo plantation and keeps strict control over it. We are engaged management in strict accordance to the international organic standard of OCIA/NOP, so as to ensure each bamboo we select is of 100% natural growth and without any chemical pesticides or chemical organic materials

Production Management

In order to reduce the pollutant discharge during production, we have rebuilt the discharging establishment. All the sewage is discharged after the process of filtration and reclamation. In addition, we have strict controls on exhaust emission. All the data have met the government environmental protecting standards.

Dyeing

In dyeing, we strictly use azo-free environmental-protecting dyestuffs, or follow your request to select vegetal dyestuffs, which are more natural and eco-friendly (Vegetal dyestuffs color card).

Oeko-tex 100 Class I certified

TENBRO bamboo fiber has passed oeko-tex 100 Class I, that means TENBRO bamboo fiber is free of harmful substance such as, TENBRO bamboo fiber is safe material even for baby use.

Naturally Antibacteria

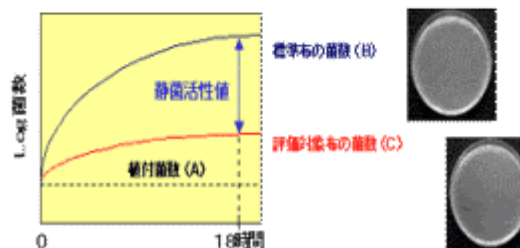
TENBRO Bamboo fiber has natural functions of anti-bacteria and deodorization. Even after fifty times of washing, TENBRO bamboo fiber fabric still possesses excellent function of anti-bacteria. TENBRO Bamboo fiber's natural anti-bacteria function differs greatly from that of chemical additive. The latter often tend to cause skin allergy when added to apparel.

抗菌防臭性

繊維上の細菌の増殖を抑制する性質。標準布と評価対象布に細菌を接種し、培養後の生菌数を測定、標準布に対する評価対象布の生菌数の差を評価する。

- ・試験方法：繊維評価技術協議会(旧SEK)で統一された試験法を採用
- ・評価基準：SEK基準 静菌活性値 ≥ 2 以上を合格とする
- ・対象菌種：黄色ブドウ球菌(staphylococcus aureus)

静菌活性値 一定量の菌を植え付けた標準布と評価対象布の、168時間後の生菌数の対数値差 $\text{Log}B - \text{Log}C$ により算出
【例】168時間後の標準布の生菌数が 10^8 個、評価対象布の生菌数が 10^6 個の場合、
静菌活性値 = $\text{Log}10^8 - \text{Log}10^6 = 2$



The antibacterial test report by Japan

spinner inspecting foundation:

JAPAN SPINNERS INSPECTING FOUNDATION

TEST CERTIFICATE

TEST NO.JSIF SH-7762-1

TEST SAMPLE:100%BAMBOO FIBER FABRIC

TEST ITEM:TESTING FOR ANTIBACTERIAL OF TEXTILES

TEST BACTERIA:MRSA STAPHYLOCOCCUS IID 1677

TEST METHOD:JIS L1902 QUANTITATIVE TEST

TEST RESULTS:

The number of inoculated bacteria(A)	2.3×10(4)	logA4.4	
The number of the bacteria in untreated	1.4×10(7)	logB7.1	
CONTROL SAMPLE AFTER INOCULATION(B)			
test sample	the number of the bacteria in test	logC	logB-logC
	sample after inoculation		
	1.0×1.0	1.3	3.1

CONCLUSION:The test result is more than 2.2,it can be Concluded that test sample of bamboo fiber fabric has the antibacterial function.

Breathable And Soft Feel

Because the cross-section of the TENBRO bamboo fiber is filled with various micro-gaps and micro-holes,it has much better moisture absorption and ventilation.With this unparalleled micro-moisture ,TENBRO bamboo fiber apparel can absorb and evaporate humans weeat in a split second.

TENBRO Bamboo fiber has extremely soft and comfortable hand feel and beautiful luster similar to silk.

Test Report

1. Physical Parameters of Bamboo Fiber

Physical Parameters of Bamboo Fiber					
Testing condition: Temperature : 20 °C Relative humidity: 65%±3%)	1.5DX38MM	2DX51MM	3DX86MM	3DX89MM	3DX102MM
Dry tensile strength (CN/dtex)	2.15	2.11	2.4	2.36	2.29

Dry elongation at break (%)	24.9	25.7	21.2	19	18.1
Wet tensile strength (CN/dtex)	1.21	1.25	1.36	1.19	1.35
Linear density percentage of deviation (%)	0.6	0	-2.4	-1.8	-1.5
Percentage of length deviation (%)	-3.1	1.4	-2.3	-3.6	-0.3
Over-length staple fiber (%)	0.4	1	0	0	0
Over-cut fiber (mg/100g)	3.2	10.1	3.5	0	1.1
Oil content (%)	0.2	0.26	0.28	0.3	0.3
Residual sulfur (mg/100g)	12.2	18.4	9.5	11.8	10.5
Whiteness (%)	68.8	59.9	66.3	61.8	66.5
Coefficient of dry tenacity variation (CV)(%)	16.72	8.66	12.11	10	12.6
Defect (mg/100g)	3.4	3.7	3.6	0.6	2.7
Oil-stained fiber (mg/100g)	0	0	0	0	0
Moisture regain (%)	10.82	12.96	11.4	10.37	10.29
Rate	GRADE A	GRADE A	GRADE A	GRADE A	GRADE A

2. 100% Bamboo Ringspun Yarn Technical Data

100% Bamboo Ringspun Yarn Technical Data							
NE	16NE	21NE	24NE	30NE	32NE	40NE	50NE
NM	27NM	35.5NM	40.6NM	50.7NM	54NM	67.6NM	84NM
CV%	2	2	2.2	2.3	2.3	2.8	2.4
TWIST	523.1	583.7	781.7	712.8	724.8	815.7	930
TPI	13.08	16.51	19.54	17.82	18.12	20.39	23.25
CV%	2.6	3.2	2.81	3.79	3.38	2.46	3.8

STRENGTH(CN)	550.7	439.2	350	290.3	286.7	209.4	158
RKM	15.6	15.7	14	14.8	14.4	13.6	12.6
CV% RKM	9	8.1	8.2	8.3	8.3	9.5	11.9
ELONGGATION(%)	12.5	11.9	11.4	11.4	11.1	10.3	9.7
CV% ELONGGATION	13.2	12.1	10.3	10.1	9.4	9.5	13
IMPERFECTIONS							
THICK/1000M	5	7	8	10	10	35	40
THIN/1000M	4	1	1	1	1	4	14
NEPS/1000M	9	10	15	23	25	39	51
HAIRINESS%	4	3.98	4.13	5.2	4.3	3	4
U%	11.2	10.3	13.2	12.4	12.3	13.5	14.8

70% Bamboo/30%cotton Ringspun Yarn Technical Data			
NE	21NE	32NE	40NE
NM	35.5NM	54NM	67.6NM
CV%	2	2.2	2.7
TWIST	580	725	816
TPI	16.4	18.12	20.4
CV%	3.15	3.35	3.35
RKM	13.6	12.3	11.8
CV% RKM	8.3	8.5	9.5
ELONGGATION(%)	11.9	11.1	10.3
CV% ELONGGATION	12	9	9

IMPERFECTIONS			
THICK/1000M	4	15	40
THIN/1000M	0	1	6
NEPS/1000M	10	29	47
HAIRINESS%	4	4.2	4.3
U%	10.4	12.3	13.9

3. Anti-bacteria Test

	item	test result	test result
			75D/30F
Bamboo rayon filament	Dtex		
	Average	82.8	134.9
	Deviation	-0.6	1.2
	CV%	1.66	1.47
	Dry tensile strength (CN/dtex)	2	1.97
	Dry elongation at break (%)	12.8	12.8
	Dry enlongaton CV%	8.68	8.39
	Color evenness	3.5	3.5
	F deviation	0	0
	Sizing rate%	1.76	1.49

4. Physicals Parameters Compared With Other Fibers

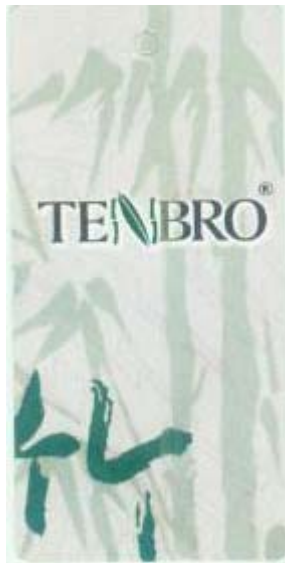
Testing Item		Measure	Cotton 100%	Bamboo100%	comparison	Testing method
Antibacterial	Sterilization	Log	4.4	1.3	3.4 Times Up	JAFET Method
Activity	Reduction		7.1	1.3	5.5 Times Up	
Electrostatic Propensity		Volt	(cotton)190	(cotton)15	12 Times Up	B Method
			(wool)680	(wool)290		
Water Absorption		%	74.2	115.7	60%Up	Tumble Jar Dynamic Test
Drying Rate		g/202.5cm ²	27.32	32.58	20%Up	B Method
Breaking Strength		%	50	65	30%Up	Gas Detection Tube M.
Bursting Strength		N	(warp)827.1	(warp)833.4	15%	C.R.E, Grab Method
			(weft)490.8	(weft)559.8		
Abrasion Resistance		kgs/cm ²	7.6	8.0	--	Diaphragm Method
Colorfastness To Light		Times	15000	Above20,000	30%Up	Martindale Method
Colorfastness To Washing		Grade	4-5	4-5	--	A-1 Method
Colorfastness To Rubbing		Grade	4-5	4-5	--	A-1 Method
Colorfastness To Perspiration		Grade	4	4	--	A-1 Method

5. Physical Parameters of Bamboo Yarn Top

top specification	3D×88mm
Average length	68.7mm
Standard weight	21
Moisture regain %	10.7
Average weight (m/g)	20.8
Weight unevenness %	0.97
Coefficient of dispersion	20.1
Staple under 30mm	0.84
Ranges(+ -)	+0.4 -0.4
Mean-square deviation	17.7
Nub/g	0.25

Tags Application





TENBRO 竹纖維精選天然優質竹材為原料，具有良好的天然抗菌性，其制成的織物柔軟、透氣、色澤鮮艷亮麗。

TENBRO bamboo fiber is refined from natural bamboo of high quality. Textile made of **TENBRO** fiber it is characterized by its naturally antibacterial property and excellent permeability, soft feel, splendid color effect of pigmentation.

TENBRO 竹纖維は精選された天然上質竹材を原料として、優れた天然抗菌効果をもち、その織物は肌触りと透気性が良く、色鮮やかで、光沢感を持っています。