

LITRAX BAMBOO

Thermo Bamboo Yarns

2007

Distributed by



swicofil@swicofil.com

Tel. +41 41 2679024

LITRAX TWO



LITRAX TWO Thermo Bamboo Insulating Staple Fiber 1.5D

What is LITRAX TWO?

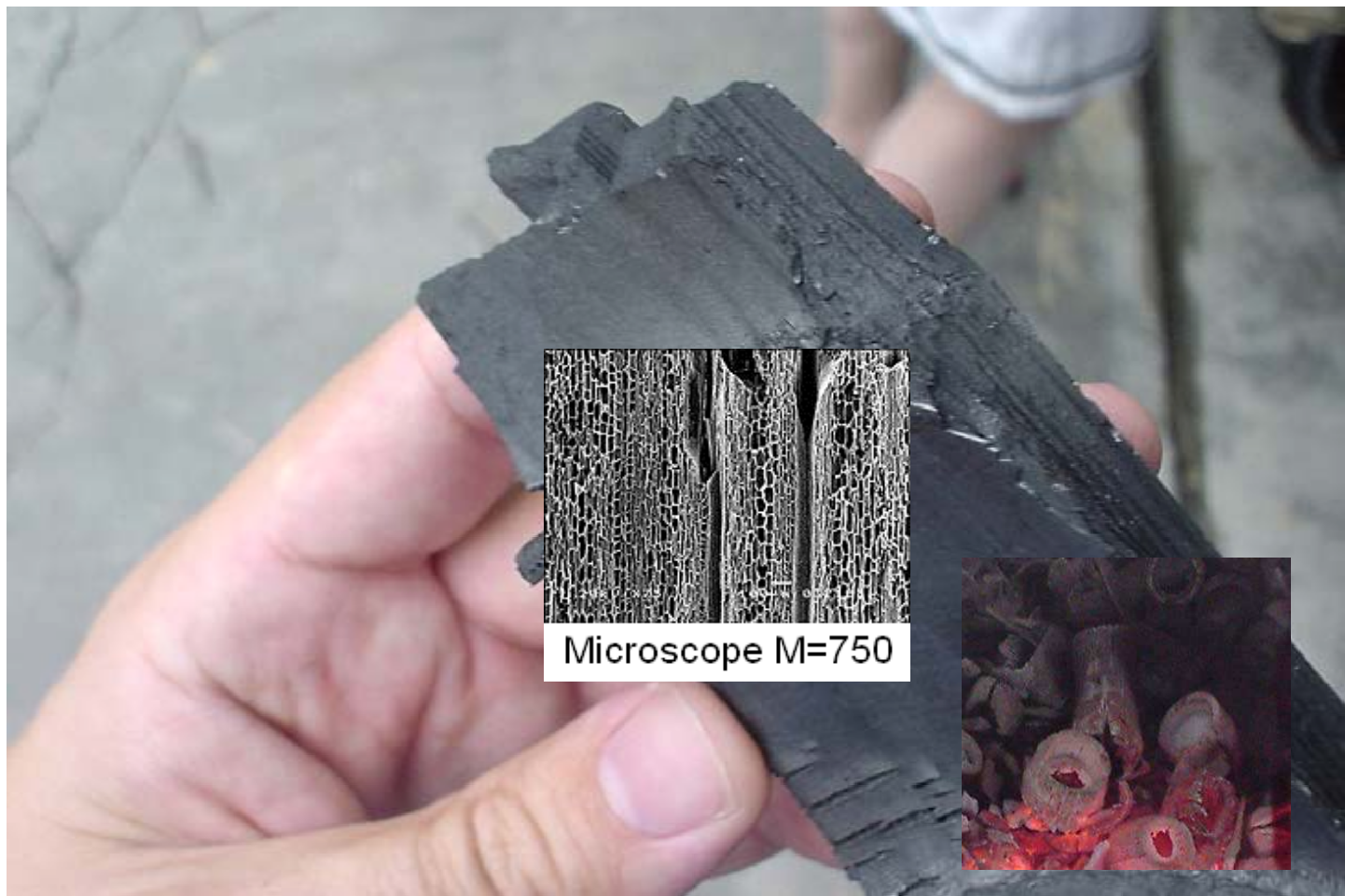
LITRAX TWO is a Thermo Bamboo insulating fiber composite processed from crystallizing and polymerizing bamboo. LITRAX TWO Thermo Bamboo fibers & yarns apply for paddings of beddings, clothes, winter fashion, shoes, sleeping bags, car seats, outdoor wear, medical and industrial applications.

Our insulating fibers accumulate and store heat, keep warm and interact with the body and environment simultaneously. We have the standard insulating fiber pads TBF-X (jackets, ski suits, sleeping bags, bedding), TBF-XS (shoe section & base), and TBF-XT (outdoor wear, gloves, accessories).

LITRAX TWO Thermo Bamboo fibers insulate from 0.8 up to 2.06 CLO which is equivalent to a massive and unprecedented 17.8°C raised temperature (!).

(Test Method according to EN13537 & ASTM1518-1985)





LITRAX TWO Thermo Bamboo Technology

What is LITRAX Thermo Bamboo ?

Selected Bamboo species are processed under high temperature until they reach a crystallized status. The applied heat collapses the original structure of bamboo to a highly condensed net structure with micro pores of 50 to 90nm size. If the net would be flattened, the actual surface of 1gram crystallized Thermo Bamboo would reach the size of a baseball field. Unbelievable? But true.

Crystallized Thermo Bamboo has enormous absorption and filtering capacity. Crystallized hardened bamboo is a strong inhaler of both liquid chemicals and odors or simply humidity. It can store heat and release back large amounts of infrared rays. Due to the small size of the individual pores, UV rays and other wavelengths above 200nm would typically not pass but simply be filtered out





LITRAX TWO Thermo Bamboo Benefits

What are the benefits?

Processed into fiber, yarn and finally fabric, this extraordinary product has unprecedented thermal and insulation capabilities like no other product. High cloth warming and insulation values above 2.00 (clo) are now possible with a fraction of cloth or fiber needed compared to any previously known textile.

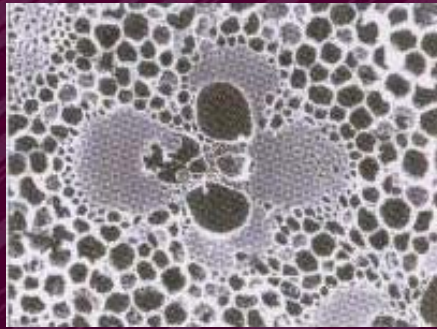
Sweat or bad odor are simply absorbed by Thermo Bamboo . The heat generating capability of Thermobamboo naturally increases the blood circulation, with surprising effects. Strong insulation is now possible with thin layers of clothing, allowing the textile industry unprecedented elegance of body shaping in winter fashion, outdoor wear, shoes and polar textiles.

Summer fashion can now be enriched with Thermo Bamboo , enhancing the protection rate against harmful UV rays.

The bedding industry will create new thin and elegant comforters that insulate better than any old thick down feather cover, with the advantages of being fully washable, allergy- and mite-free.



THERMOBAMBOO!



LITRAXBAMBOO

LITRAX TWO Thermo Bamboo Insulating Fibers & Yarns

How good insulates LITRAX TWO Thermo Bamboo ?

The standard textile thermal insulation unit (CLO) is a measure by first considering that the resting metabolic heat production of an average man is about $50 \text{ kcal/m}^2 \cdot \text{h}$. Approximately 25% of this heat is lost via the respiratory system and by diffusion of moisture through the skin. Therefore, $38 \text{ kcal/m}^2 \cdot \text{h}$ remains to be lost through the clothing via radiation, conduction, and convection. The temperature difference across the clothing is equal to the difference between the mean skin temperature (T_s) and the ambient air temperature (T_a), assuming the mean radiant temperature of the surroundings is equal to the air temperature.

Consequently, a clothed person with a comfortable skin temperature of 33.3°C (92°F) in a comfortable environment at 21°C (70°F), has a 12°C temperature gradient across which $38 \text{ kcal/m}^2 \cdot \text{h}$ is transferred.

A heat transfer coefficient of $0.32^\circ\text{C} \cdot \text{m}^2 \cdot \text{h/kcal}$ is calculated by dividing the temperature difference by the heat flow (i.e., $12/38$). About 0.14 of the 0.32 total is contributed by the surrounding air layer, so 0.18 is contributed by the clothing alone. Thus, 1 CLO of insulation is equal to $0.18 \text{ m}^2 \cdot ^\circ\text{C} \cdot \text{h/kcal}$. A thick business suit ensemble provides an average of approximately 1 CLO of intrinsic insulation for the whole body. Common textiles (Shirts, Pullovers) insulate between 0.1 - 0.5 CLO. Common bedding systems insulate between 1.4 and 1.6 CLO.

LITRAX TWO fibers insulate from 0.8 up to 2.06 clo which is equivalent to a massive 17.8°C raised temperature (!).

(Method according to EN13537 & ASTM1518-1985)





LITRAX TWO Thermo Bamboo Cotton Yarn Ne 20/1

LX-THBCY.Ne020.1
100% Thermo Bamboo Cotton
Ne 20/1
grey





LITRAX TWO Thermo Bamboo Cotton Yarn Ne 30/1

LX-THBCY.Ne030.1
100% Thermo Bamboo Cotton
Ne 30/1
grey





LITRAX TWO Thermo Bamboo Cotton Yarn Ne 40/1

LX-THBCY.Ne040.1
100% Thermo Bamboo Cotton
Ne 40/1
grey





LITRAX TWO Thermo Bamboo
Polyester textured Set dtex 84 f 36 (S) x 1

LX-THBPY-75D.36F

100% Thermo Bamboo Polyester textured Set grey
dtex 84 f 36 (S) x 1
on cylindrical bobbins





LITRAX TWO Thermo Bamboo
Polyester textured Set dtex 84 f 72 (S) x 1

LX-THBPY-75D.72F

100% Thermo Bamboo Polyester textured Set grey
dtex 84 f 72 (S) x 1
on cylindrical bobbins



swicofil@swicofil.com

Tel. +41 41 2679024

LITRAX TWO