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Role of Bamboo Fabric in Sports Clothing

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Abstract

In the recent era of development, the global market for sportswear textile manufacturing industries has increased in consumption of active sportswear. The performance characteristics of active sportswear directly influence comfort level and athletic performance during sports activities. Different types of sportswear products require different performance characteristics. Appropriate moisture and heat management are the key factors for the endowment of the required physiological comfort level. In highly engineered textile-based sports goods, special characteristics are incorporated in the polymer/fibers/product manufacturing procedures/finishing techniques to obtain the maximum performance and comfort level. The fashion world is constantly seeking new, natural, eco-friendly textile materials. India, after China, is the second richest country in bamboo genetic resources a novel textile material. The bamboo (rayon) fabric was tested for fiber and fabric properties assessing that the sourced fabric was within the minimum expected performance standards. Acceptability and suitability by retailers and sportspersons through another survey was gathered. The use of bamboo knits for sportswear was well accepted showing a high potential for bamboo knitwear in the market. Incorporation of wider color range and surface embellishments will enhance the appearance of sportswear adding more variety.

Key words: Bamboo, Active wear, Eco Friendly, Fabric, Sportswear

Introduction

Sportswear is the clothing that has been designed especially for sports purposes. It is also called sports textile or sport tech. The textiles which are used in sports in any form are called as sport tech. Sportswear or active wear is clothing including footwear, worn for sports and physical exercise. Nowadays sophisticated technologies are used in technical textiles to produce sportswear. The light weight and safety features of sport tech have become important in their substitution for other materials.

Bamboo pulp yields a natural fabric that's light and has an anti-static nature. Bamboo fiber is also moisture wicking, making it a completely odorless sportswear. It also provides remarkable protection from UV rays, so wearing it out in the sun for extended periods won't pose any problems. In general, bamboo fibre can be used for practically every application in which cotton is used. Some manufacturers may even choose this type of fabric to cotton due to its notable characteristics that benefit production and manufacturing processes.

Function of Sportswear

1. Anti-Static performance
2. Heat transport function
3. Ultraviolet performance
4. Moisture transport performance
5. Anti-Microbial performance

Properties of Sportswear

1. Resilience
2. Absorptiveness
3. Air permeability
4. Lightweight
5. Stress and strain
6. Easy care
7. Strength
8. Durability

Bamboo Fabric



Bamboo - Sportswear Fabric

Bamboo is a profoundly flexible common asset and for ranges has been utilized for a assortment of employments from catering and building to transport, materials and indeed mending purposes. As it were as of late has bamboo gotten to be more commonly utilized in clothing and sportswear as we gradually find its wide run of benefits and eco-friendly arrangements to numerous of our modern-day necessities. Along with having exceptional common properties, Bamboo is considered the world’s most feasible asset - it can develop 20 to 30cm in a day. Bamboo too captivates five times the sum of carbon dioxide and produces 35% more oxygen than a comparable stand of trees.

Properties of Bamboo Sportswear Fabric

1. Hypoallergenic and anti-irritant - The eco-friendly bamboo filaments do not bother the skin. Gentler than numerous artificial filaments, bamboo clothing is a normal arrangement for those with skin sensitivities.
2. Breathable and thermo-regulating - Remain comfortable of any kind the climate with characteristic body temperature parameter which keeps you cool in summer and warm in winter.
3. Highly sweat permeable and odour-resistant - Bamboo clothing is more permeable than cotton but dries quicker which makes a difference to wick dampness absent from the skin to keep you dry.

4. Superlatively delicate, light and adaptable - Wrap yourself in one of the mildest textures and move unreservedly and comfortably.
5. Naturally UV defensive - Secure your skin from the sun's beams in comfort.
6. Biodegradable - A greener and eco-friendly fabric that will basically coming back to the Earth.

Types of Bamboo Fabric

Here are Three Primary Sorts of Bamboo Texture. These Varieties Include

Bamboo Viscose: This sort of bamboo texture is about rise to to other sorts of thick. The as it were reason why bamboo is utilized in the generation of this texture instep of another sort of wood is compact fabricating costs; the benefits of this fiber are not display in its gooey shape, and buyers ought to be suspicious of the conflating this sort of material with genuine mechanically-produced bamboo fabric.

Lyocell-Type Bamboo Fabric: This sort of texture is comparative to thick, but it is made with a closed-loop development strategy. In expansion, the chemical development of the cellulose utilized to make this sort of texture is not changed in the manufacture handle, which implies that it holds numerous of the useful qualities that are moreover famous in mechanically-produced bamboo fabric.

Mechanically-Produced Fine Bamboo Fiber: This sort of texture is the as it were alternative that can be considered to be genuine "bamboo texture." It is generally extravagant and time-consuming to abdicate, but it offers distant more noteworthy benefits than the sorts of textures that are not created through machine-driven implies. This sort of bamboo texture is exceptionally solid, flexible, and soft.

Bamboo Fabric- Activewear

Bamboo is an great fabric to utilize in clothing that will see parts of sweat and dampness. Sports bras, yoga pants, or dynamic tees - you title it, bamboo clothing is incredible for sweat-soaked circumstances for a modest bunch of reasons that work together to keep you cool, dry and odor-free.

Bamboo Fabric - Moisture Wicking

Bamboo holds solid moisture-wicking properties since it is a empty fiber. This implies that the texture can retain three times its weight in water some time recently feeling damp. The texture pulls the dampness (sweat) absent from your skin and permits it to dissipate rapidly, keeping you cool and dry. The bamboo plant is normally great at drenching up water when it develops - not as it were does this explain a few of its maintainability benefits but it too clarifies why it's awesome for dynamic wear.

Bamboo Fabric - Antimicrobial

Bamboo has common antimicrobial properties, from a bio-agent called "bamboo Kun" that avoids microbes from developing. This implies that your bamboo clothing will not as it were feel dryer, but will moreover scent fresher for longer. The bamboo plant's Kun makes a difference to ward off bothers and infections so it can proceed to develop. Kun is a common bacteriostatic specialist as it were found in bamboo, which makes a difference avoid the development of microscopic organisms. Fiber made out of bamboo benefits from the antibacterial properties of the plant itself. Indeed when bamboo filaments are changed over from the crude fabric into the texture, the antimicrobial properties stay intact.

Bamboo Fabric - Breathable

Bamboo is a profoundly breathable texture, making it perfect for competitors or dynamic wear and athletic attire. The empty structure of bamboo strands permits discuss to circulate more openly through the texture, which makes a difference to control body temperature by wicking absent dampness and keeping you cool. The way bamboo filaments are built moreover permits your skin to breathe more effectively. When you wear bamboo clothing, the texture will really offer assistance to direct your body temperature by wicking absent dampness and keeping you cool.

Bamboo Fabric - Durable

Bamboo is a solid and solid fabric, making it perfect for dynamic wear that will see a part of wear and tear. The strands are twice as solid as cotton, making them less likely to tear or tear. The ductile quality of bamboo strands is higher than numerous common material strands like cotton or material.

Bamboo is a thick and sinewy plant that is inconceivably versatile in the wild and develops effortlessly in numerous settings. The strands made from the bamboo plant that afterward go into clothing are long and intense, which makes them safe to wear. The strands of the bamboo plant are moreover much longer and smoother than cotton which makes clothing that is safe to fraying. The smooth and sleek feel of bamboo clothing makes it troublesome to capture on edges and tear. The fabric is moreover safe to pilling and bunching up.

Bamboo Fabric - Eco-Friendly

Dependably collected bamboo is by and large considered one of the more naturally inviting filaments. On the other hand, bamboo lyocell and mechanically made bamboo textures are distant more eco-friendly than bamboo thick. Chemical fabricating that’s utilized to make bamboo gooey is the fastest way to break the strands down to shape a string, but it can discharge contamination into the conduits, though mechanical fabricating employments no chemicals but is distant more seriously with labor.

Caring for Bamboo Sportswear

- While Bamboo offers numerous benefits to offer assistance accomplish ideal sports execution, more noteworthy care is basic to affirm its longevity:
- Bamboo is a better fabric – Velcro must not be rubbed against your sportswear. Cautiously join your Velcro kiddie apron without touching the bamboo fabric. Velcro can harm indeed the hardest of fabrics. Bamboo fabrics will sustain their special qualities when washed inside a laundry bag with a gentle series using cold to warm water. A gentle detergent is also recommended, free of bleach.
- Bamboo textures will support their extraordinary qualities when washed interior a clothing sack with a tender arrangement utilizing cold to warm water.
- A delicate cleanser is too suggested, free of bleach.
- Air dry Bamboo sportswear level in the shade or utilize a tumble dryer on the cool setting.
- If pressing is required the most reduced warm setting is best to dodge any harm and utilize light steam.

Use of Nanotechnology in Sportswear and Shoes

Multifunctional sports clothing can be fabricated by utilizing nanotechnology in textile-like nanorods, nanofibers, and nano-finished materials. Assurance from extraordinary climate conditions can be conveyed by creating articles of clothing with discuss and vapor penetrability, wind, rain, snow, and fluid impermeability.

Use of Electronics in Sportswear

Another critical space is the ceaseless checking of physiological and organic changes in competitors included in tall physical and hazard sports. Intelligently electronic materials have risen as apparatuses to identify arm activity for making strides the tennis or golf swing, development of the body, calorie level, the weight of blood, remove traveled, and time of movement. Textile-based Piezo-resistive sensors were created for observing breathing rate. For checking chemical or physical changes, the heart rates of competitors, changes in midsection circumference, time of work out, and body temperature are valuable in a few applications of sports textiles.

Opportunities for Growth

In the past, well-known multinational sportswear brands ruled the Indian showcase. These companies entered the Indian advertise numerous a long time prior and effectively solidified their position there.

But over time, Indian consumers' developing energy for sportswear in common and wellness, in specific, given homegrown businesses the chance to meet the rising request in the household market.

Due to the cost extend, Indian brands are predominant to these remote retailers. Over time, other athletic companies with sensibly estimated, high-quality items have joined the advertise and developed well known with the planning market.

Conclusion

In the current era of development, high-active sports textile is a very challenging field that required functionality with comfort properties. Market growth of sports textiles was increased day by day owing to the increase in sports participation and consumption of sports goods. The suitable selection of raw material, fiber morphology, yarn, fabric structure, type of finish, and garment pattern will provide the required functionality. Performance characteristics of the sportswear were also increased with the usage of highly elastic filaments (reduce drag forces in the garment), antibacterial finishes (reduce microbial growth due to sweating), and breathable fabrics (moisture management and temperature control). Moreover, functionalized new synthetic fibers were developed by changing the cross-section for moisture transportation. In the field of sports textiles, various innovative products such as polymers, fibers, yarns, fabrics, and finishes were developed with maximum comfort characteristics. To produce sportswear exhibiting excellent thermal insulation properties, hollow structured thermo-regulated fibers are used. For the summer sportswear exhibiting moisture management properties, different types of functional fibers, yarns, blends of fibers, fabrics, and coatings were used in the structure of textile materials.

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