INTERACTIVE SOLUTIONS FOR FUNCTIONAL FABRICS AND GARMENTS

Where function meets fashion, we are there.
UNLEASH ACTIVWEAR MARKET
POTENTIAL LEVERAGING INTERTEK’S
EXPERTISE AND SOLUTIONS

From everyday workout apparel to team sports uniforms, Intertek has the solutions and expertise you need to assure the function and performance of your active apparel.

Marketing claims assured
Whether you sell jackets for hiking or pants for yoga, our solutions offer assurances that your jackets are windproof or your yoga pants stretch and recover as advertised. Count on us to help you establish a trusted image of your brand and products in the competitive consumer market.

Performance qualified
With the absence of regulatory requirements for the majority of the functional claims, our experts can advise you on the different types of tests available to evaluate fabric for different purposes. We’ve been at the forefront of high performance fabric testing over the past decade, enabling Intertek to offer best-in-class recommendations and advice in this domain.

Innovation to power ahead
As fabric technology evolves in the industry, our expertise in high performance fabric research and development projects propels your speed to market, adding unique value to your brands and consumers. New to the athleisure market? You can partner with us on your product development.
TESTING FOR ALL PROPERTIES AND PERFORMANCE CLAIMS

COMFORT

Quick Dry
We take absorbency, wicking and drying rate performance into evaluation for quick-dry claims on two-way transportation fabric.

Breathability
Often tested together with waterproof and/or windproof properties, it measures how well the fabric transfers sweat from the human body into the air. The more breathable the fabric is, the more comfortable the wearer feels. We look into both Water Vapour Permeability (WVP) and Water Vapour Resistance (Wt) when determining breathability.

Moisture Management
Moisture Management Test (MMT) is specially designed for one-way transportation fabric to determine how good it is in carrying moisture away from skin to atmosphere.

Thermal Regulation
By measuring the degree of warmth or cooling generated by fabrics, we can evaluate the thermal claims as stated.

Stretch & Recovery
Stretch examines how elongated the fabric can be when force applied two-way (crosswise direction) or four-way (both crosswise and lengthwise direction) without breaking. Recovery defines that the fabric can go back to its original dimension after stretching.

HEALTH & BEAUTY

Anti-aging
The test aims at measuring how effective the fabric is in removing free radicals, which are major causes of aging.

Anti-bacterial
Testing by qualitative and/or quantitative approaches, the test determines anti-bacterial effectiveness of the fabric.

Anti-mold
The test evaluates how good the fabric is in resisting growth of fungus and mildew. This is particularly important for garments and equipment intended for outdoor use.

De-odorization
Targeting major chemical causes of odor, the test measures the odor reduction rate of fabric.

Moisturizing
Collagen keeps our skin and cells young and moisturized, and we can measure the amount of collagen in the fabric.

Far Infrared
Through transforming heat energy into far infrared, the garment can generate warmth for wearers and keep them warm in extreme cold landscape. We can measure the wave length re-radiated from the fabric to determine its far infrared property.

FUNCTIONAL

Windproof
The test measures the air permeability of the fabric. The lower the air permeability, the better the fabric is in windproofing.

Water Resistance
As a very common marketing feature of almost all outerwear and outdoor gear such as bags and tents, water resistance measures how resistant the fabric is against water penetration under rain or storm.

Water Repellency
Mostly associated with “shower proof” outerwear, water repellent fabric is used to keep wearers dry. Leveraging the hydrophobic property of water (also known as the “lotus effect”), water droplet and snow can be repelled easily from fabric without wetting it.

Anti-static
Created to prevent discomfort caused by static and offer safety in environments vulnerable to static, anti-static fabric can be tested for its resistance to static electricity.

UPF
Ultraviolet Protection Factor (UPF) is used to measure the UV protection capability of fabric/garments. As exposure to UVA and UVB are deemed harmful to human body, some key retailing markets such as US and China impose regulatory requirement on UPF claim.

Visibility
Neon green or fluorescent yellow are frequently used in apparel and body accessories worn outdoors. Apart from simply being a design element, these visible colours keep the wearer’s safe in the dark. We can customize visibility test for fabric made by fluorescent colorants and/or retroreflective materials or photoluminescence to simulate different scenarios. Hunter orange, as told by its name, can also be tested to ensure it is functional for hunting purposes.

Camouflage
Uniforms made from camouflage fabric are used in hunting to minimize the chance of being discovered. We measure the spectral reflectance of the camouflage pattern on the fabric to verify this claim.

DURABILITY MATTERS

To better stimulate real use of the garment, repeated washes are often conducted before high performance testing. This is particularly essential for functions achieved by coating and finishing such as anti-bacterial, anti-mold, water resistance, water repellency and UPF. Similarly, sunlight exposure leads to deteriorated performance of outdoor gear prematurely. Weathering tests are typical options prior to high performance tests. From innovation to manufacturing to retailing, Intertek can help you succeed in the Athleisure market.
**HIGH PERFORMANCE APPAREL**

**FROM HEAD TO TOE**

**FITNESS**
- Anti-aging
- Anti-bacterial
- Breathability
- De-odorization
- Quick Dry
- Stretch & Recovery

**HIKING**
- Anti-bacterial
- Breathability
- De-odorization
- Quick Dry
- UPF
- Visibility

**WORKWEAR**
- Anti-bacterial
- Breathability
- De-odorization
- Water Repellency
- Water Resistance
- Windproof

**GOLF**
- Anti-bacterial
- Breathability
- De-odorization
- Quick Dry
- UPF

**TEAMSPOUTS**
- Breathability
- Anti-bacterial
- De-odorization
- Quick Dry

**FISHING**
- Anti-bacterial
- Breathability
- De-odorization
- Quick Dry
- UPF
- Visibility

**MOUNTAINEERING**
- Anti-bacterial
- Breathability
- De-odorization
- Quick Dry
- Thermal Regulation

**HIGH PERFORMANCE APPAREL TESTING RECOMMENDATIONS**

<table>
<thead>
<tr>
<th>COMFORT</th>
<th>OUR RECOMMENDATIONS</th>
</tr>
</thead>
</table>
| Quick Dry | Absorbency | AATCC 79
JIS LI 907 |
| Wicking | AATCC 197
JIS L 1307 |
| Drying Rate | AATCC 109
AATCC 201
JIS L 1096 |
| Breathability | Water Vapour Permeability (WVP) | ASTM E196
JIS 1095
BS 7209 |
| Moisture Management | AATCC 195 |
| Thermal Regulator | Cooling | Qmax (FTTS-FA-019)
Warming by Moisture absorbing exothermic fabrics | GBT 29856
In-house
Thermal retention | ASTM D1518 (clo value) |
| Stretch & Recovery | ASTM D 3107
ASTM D 2594 |

**HEALTH & BEAUTY**

<table>
<thead>
<tr>
<th>OUR RECOMMENDATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anti-aging</td>
</tr>
</tbody>
</table>
| Anti-bacterial | Qualitative AATCC 147
Quantitative AATCC 100 |
| Anti-mold | AATCC 30 III
ASTM G21 |
| De-odorization | FTTS-FA-018
ISO 17299-2/ISO 17299-3/EC 301
GBT 38616.2 |
| Moisturizing | Intertek method |
| Far Infrared | FTTS-FA-010 |

**FUNCTIONAL**

<table>
<thead>
<tr>
<th>OUR RECOMMENDATIONS</th>
</tr>
</thead>
</table>
| Windproof | ASTM D737
ISO 9237 |
| Water Resistance | ISO 811 (EN 20811) |
| Water Repellency | EN ISO 4920
AATCC 22 |
| Anti-static | AATCC 76 |

**SAFETY**

<table>
<thead>
<tr>
<th>OUR RECOMMENDATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>UPF</td>
</tr>
</tbody>
</table>
| Visibility | EN 1150 (for fluorescent colorants)
ASTM D6095 / ASTM D1809 (for retroreflective materials)
JIS 2 9107 / DIN 57510 (for photoluminescence) |
| Camouflage | MIL-DTL-444398
MIL-C-430910 |
Americas
Suite H
545 E. Algonquin Rd
Arlington Heights, IL 60005
United States

EMEA
The Warehouse
Brewery Lane
Leigh
WN7 2RJ
United Kingdom

Asia Pacific
1/F, Garment Centre
576 Castle Peak Road
Kowloon
Hong Kong

BF,
No. 423 Ruiguang Rd.,
Neihu Dist., Taipei 11492,
Taiwan

+1 800 WORLD LAB
northamerica.softlines@intertek.com
interTek.com

+44 1942 265 700
uk.softlines@intertek.com
interTek.com

+852 2173 8888
hongkong.softlines@intertek.com
interTek.com.hk

+886 2 66022888
taiwan.softlines@intertek.com
www.intertek-twn.com