



A FASHIONABLE DEFENSE – SUN PROTECTION FROM HEAD TO TOE

Tilley Endurables walks the safe sun talk

- Tilley Endurables aims to protect our clients from the calamities that can befall a traveller. We know that overexposure to the sun's harmful rays can ruin any vacation or outing. We have chosen fabrics that offer ultraviolet protection. The majority of Tilley fabrics have earned an ultraviolet protection rating of UPF 50+, the maximum rating given.

There's nothing more frustrating when travelling than a nasty sunburn, but overexposure to the sun is more than just frustrating, it can cause long-term damage. We worked closely with researchers to determine that all Tilley core fabrics will minimize vacationers' exposure to the sun from head to toe, protecting them from damaging rays without putting a damper on their holiday activities. A.T.

- Practice Safe Sun®. Wearing a loosely woven open shirt will provide some protection, however, it isn't ideal. Getting Tilley clothing rated is just one more way that Tilley Endurables can make travel easier and safer for its clients. It's as simple as checking the UPF rating label and if it's over 15, toss it in the carry on. But, sun protection doesn't stop there, it's important to remember to include a Tilley Hat, sunscreen with an SPF rating of 15 or greater, and the essential UVA and UVB protective sunglasses. Of course, a long-sleeved shirt buttoned up protects better than a tank top.

Testing, testing – UV-certified Tilley products

- All Tilley Endurables rated fabrics have undergone the strictest of tests to ensure that each item is labelled with the most accurate UPF rating, and if worn properly will help protect the wearer against the harmful and damaging effects of the sun.

The International testing and rating guidelines as established by ASTM International for determining sun-protective fabric are as strict as my criteria for determining Tilley durability. International UV Testing Laboratories measures against those standards, which are the highest standards in the world. A.T.

- The fabric tests were completed by Dr. B. Lewis Slaten of the International UV Testing Laboratories in Auburn, Alabama, and were done on a machine called a Labsphere UV 1000F Ultraviolet Transmittance Analyzer. This machine measures the spectral transmittance of a fabric sample, converting data to an Ultraviolet Protection Factor (UPF) for determining the fabric's protective ability. The fabric is first tested for UVA and UVB light transmission. **Then it is laundered 40 times and subject to 100 hours of UV light. After this point the fabric is tested again.**

The UPF ratings for level of protection found in the fabrics are classified by ASTM International as follows:

Excellent UV Protection=UPF 40–50+, blocks 97.5% of UV radiation
Very Good UV Protection=UPF 25–39, blocks 96.0–97.4% of UV radiation
Good UV Protection=UPF 15–24, blocks 93.3–95.9% of UV radiation

Most of the Tilley fabrics tested were given an Excellent UV Protection rating of UPF 50+. The maximum rating given is UPF 50+.

- We had our Hats tested independently by the AMC Cancer Research Center to determine just how much sun protection they actually provide. Due to the particular nature of the fit of the Tilley Hat - namely that it is designed to sit low on the head of the wearer, thus providing substantial protection from the sun and rain - Tilley Hat silhouettes and fabrics have been rated to provide the highest level of UV protection. Each Tilley Hat has a hang tag reminding travellers of the importance to Practice Safe Sun®.

Tilley Measures Up

The following Tilley clothing collections have been given the maximum rating of UPF50+, providing the "Excellent" UV Protection, unless otherwise stated:

- all Tilley Hats
- all Kid Toppers (hats for young children)
- all Tilley Socks
- all jackets, pants, shorts, skirts and vests in the Different Drummer Legends collection
- all pants, shorts and jackets made from AdventureCloth
- all pants, capris, shorts and jackets in the Venture Trek collection
- Women's Hemp (HE12, HE13) are rated UPF 15, also providing "Good" UV protection
- Men's Hemp Shirts (HE3, HE5) are rated UPF 15, providing "Good" UV protection
- Khaki Bush shirts for men (UL32, UL33) are rated UPF 40, providing "Excellent" UV protection.
Blue Haze is rated UPF 35, providing "Very Good" UV protection
- FreeSpirit shirts for Women (UL73) are rated UPF 35, providing "Very Good" UV protection

Having the clothing tested was important, but we want to protect our clients from head to toe and that is why all Tilley Hats, including the new Tilley Hemp Hats and all Tilley Socks are rated as providing Excellent UV Protection. We are proud to offer these products to our clients. We want people to Practice Safe Sun® so no matter where their travels take them, they can enjoy the time spent outdoors. A.T.

Sun protection terminology defined

Puzzled by the list of sun protection terms and acronyms used by scientists, doctors and manufacturers alike? The International UV Testing Laboratories provides the following definitions to simplify sun protection for everyone:

Sun-Protective Clothing

Sun-protective clothing is any garment that can provide adequate protection from the sun. Generally speaking, clothing must have a UPF fabric value of 15 to 50+ (blocks 93 – 98% of UV radiation), and cover or shade sufficient skin to protect a person from the damaging rays of the sun. Certainly any long sleeved shirt is better than no shirt, but for adequate protection it's best to choose clothing that has been tested and proven to block the sun. Skin can burn through fabric that does not meet the standards for UPF protection.

UPF

UPF stands for Ultraviolet Protection Factor. It is the ratio of the average effective ultraviolet radiation (UVR) irradiance transmitted and calculated through air to the average effective UVR irradiance transmitted and calculated through fabric. **In other words, it is the amount of ultraviolet radiation that a fabric blocks. Fabrics are tested for UPF ratings.**

- The following fabric qualities contribute to the chances that a particular garment will have a good UPF rating:
 - dark in colour
 - tight weave (can you see light through the garment)
 - thick fibres (heavier is better)
 - resilience (does it stretch and as it stretches does light pass through)

- In terms of comfort, the tendency for hot weather travellers is to dress in the bare minimum of clothing at the risk of increased sun exposure. However, sun protective clothing and comfort are not mutually exclusive. At Tilley we ensure that the clothing certified as sun protective is also good looking, versatile, easy to care for on the go, has security features for travellers and is comfortable to wear in hot weather. How do we make things that are sun protective and comfortable? Just think about the technical and design features. Here a few among many:
 - Grommets in Hats
 - Mesh in Hats and clothing
 - Moisture management sweat bands in Hats
 - Breathable fabric
 - Vents hidden from the sun and open to air

A hot weather traveller selecting sun protective clothing based solely on sleeve and pant length may be more of a hot traveller than a happy one. Design details and technical considerations incorporated into the garment are critical in the manufacture of COMFORTABLE sun protective garments. A.T.

SPF

SPF stands for Sun Protection Factor. It is the ratio of UV radiation dose required to produce recognizable redness on skin that has been protected with a sunscreen to UV radiation dose required to produce the same redness on unprotected skin. **Basically, SPF indicates how much longer it will take for skin to begin to redden with the product on than if the skin was unprotected.** Lotions/creams are tested for SPF ratings. The percentage of burning UV rays that a product blocks does not increase proportionally with the SPF value.

UVA

UVA is a long wavelength ultraviolet ray from the sun. UVA rays are the “aging” rays in the UV spectrum. UVA radiation ranges from 320 to 400 nanometers in wavelength. Some wavelengths in that range have greater potential to cause damage than other wavelengths. **UVA radiation is stronger in the early morning and late afternoon when the sun’s rays reach the Earth at an angle.**

UVB

UVB is a medium wavelength ultraviolet ray from the sun. UVB rays are the “burning” rays in the UV spectrum. UVB radiation ranges from 280 to 320 nanometers in wavelength. Some wavelengths in that range have greater potential to cause damage than other wavelengths. **UVB radiation is stronger between late morning and early afternoon when the sun’s rays are directed straight down at the Earth.**

About Tilley fabric testing

Tilley fabrics have been tested against the international standards developed by ASTM Committee D-13.65 and the American Association for Textile Chemists and Colorists (AATCC) for UV testing and labeling of sun protective clothing and shade devices and adhered to guidelines ASTM D6544 and Test Method AATCC183. The fabrics have been labeled to ASTM D6603 standards. These testing and rating guidelines have been established by ASTM International, which is a not-for-profit organization that provides a global forum for the development and publication of voluntary consensus standards for materials, products, systems and services.

The International UV Testing Laboratories

The International UV Testing Laboratories offer a number of UV testing services including: UV Transmittance Testing, Simulated Use Exposure, UV Block Certification and textile UV labelling. International UV Testing Laboratories use the internationally recognized criteria developed by ASTM International to measure the sun protective values of fabric. International UV Testing Laboratories <http://www.auburn.edu/~slatebl/index2.html>

Related Links:

British Association of Dermatologists
<http://www.bad.org.uk>

Canadian Dermatology Association
<http://www.dermatology.ca>

American Academy of Dermatology
<http://www.aad.org>

Canadian Cancer Society
<http://www.cancer.ca>

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