Marmot® Spring 2019

TREADLIGHT: Protecting the Earth We Play On

Treadlight is not a campaign. It's our way of doing business. We established our sustainability mission in 2007 and it continues to expand every year. By improving our products and practices, we minimize our environmental impact without ever sacrificing the performance of our products. We're focused on three big goals for 2019: reducing the use of PFCs, using more responsibly sourced down and increasing the amount of recycled content in our products.

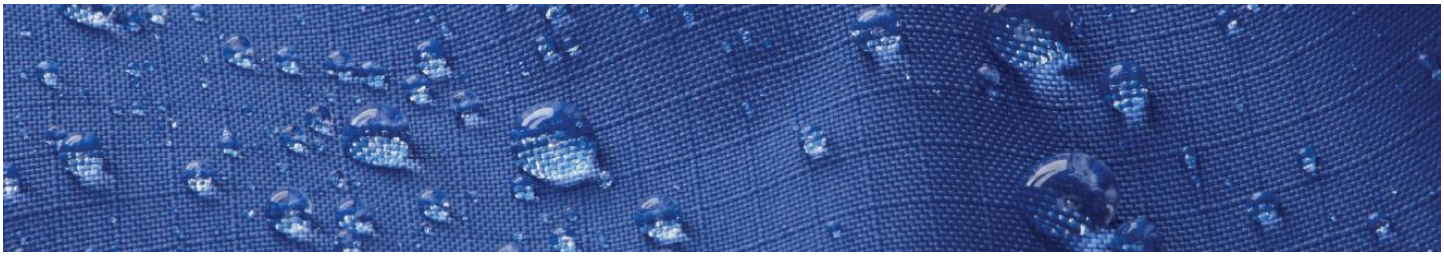
Reducing PFCs
253 Styles with PFC-free DWRs - Better chemistry means better performance, both in terms of keeping you dry and protecting the planet. We are working towards using 100% PFC-free DWRs in our products that match or beat the performance of traditional PFC-based DWRs.

Responsible Down
55 Responsible Down Standard Certified Styles - Marmot will only use cruelty-free sourced down. Marmot down has been RDS certified for many seasons, and as of 2018, our supply chain is too.

Recycled Material
123 Styles with Recycled Content - Waste not, want not. From nylon to polyester, we continue to increase our use of recycled, traceable materials without compromising our products' performance.

Below are some great examples of products that the are directly related to Marmot's Treadlight program:

New PreCip ECO jacket – recycled nylon face fabric and PFC free DWR treatment
EVODry jackets and pants – upcycled nylon face fabrics, DWR that is permanent and PFC free and solution-dyed yarns. There 10 men's and women's styles available for S19.
Trestles Elite Eco sleeping bags – 96% recycled materials, including shell, lining and fill! Available in five different temperature ratings.
Eco Featherless jackets – down-like synthetic insulation that is made up of 75% recycled materials
Thread™ tee shirts – made from 50% reclaimed cotton and 50% upcycled plastic. Over 1,300 jobs have been created in Haiti to collect discarded plastic bottles. The use of environmentally friendly dyes and a proprietary printing process uses much less water – saving 115 gallons of water per tee shirt!



WATERPROOF/BREATHABLE TECHNOLOGIES

Current technologies continue to strive for **improved breathability** while maintaining high levels of waterproofness. Increased breathability provides a much **more comfortable garment** that functions better in more diverse climates and activities.

How Do Waterproof/Breathable Laminates and Coatings Work?

The laminate or coating is applied to the interior side of the face fabric. They have upwards of 9 billion pores per square inch. These pores are so small that large water molecules cannot pass through them, but since water vapor is significantly smaller, it can pass through the microscopic pores.

Marmot has a long standing partnership with **GORE-TEX®** and currently use their technologies, as well as Marmot's own proprietary laminate, **NanoPro® Membrain®**, and our proprietary coating, **NanoPro®**. By using proprietary technologies, Marmot can differentiate their product in many ways, by offering fabrics that are not available to our competitors. This allows Marmot to manufacture garments with lighter face fabrics, items with 4-way stretch and outerwear with higher value due to lower retail prices.

What is the difference between a laminate and a coating?

A laminate is more durable and provides higher levels of waterproofness and breathability. Coated garments are significantly less expensive and still provide good protection from the elements, but they won't last as long or provide as high of comfort levels as a laminated garment.

3, 2.5 & 2 Layer Options

This refers to the number of layers that are laminated to each other. There is always a protective layer of some sort between the laminate or coating and the wearer's skin. This adds durability to the laminate or coating and keeps natural skin oils from contaminating and clogging the pores in the laminate or coating. It can also aid in moisture management by wicking moisture away from the skin.

- **3 Layer** = face fabric/laminate/tricot(lightweight fabric) – very durable, high performance – great for alpinism
- **2.5 Layer** = face fabric/laminate/protective treatment – very lightweight and compactable – great for backpacking and rainwear
- **2 Layer** = face fabric/laminate/hanging lining that is not laminated to the other two layers – great value, lots of pockets/features – great for a alpine ski parka

Waterproof/Breathable Options from Marmot

GORE-TEX®

- GORE-TEX® Paclite® - Value, compactable, lightweight – 2.5 layer

MARMOT

- NanoPro™ Membrain – 2 & 2.5 layer technology that offers unsurpassed breathability and superb waterproofness – Dynamic air permeability provide an incredible comfort range
- NanoPro™ Coating – the most advanced 2.5 layer coating available, amazing value, used in our PreCip® products

Pertex®

- Quantum – incredibly lightweight 2.5 layer laminate

NEW! Marmot NanoPro™ PreCip Eco coating

The coating itself hasn't changed, but the face fabric on the new PreCip jacket is now recycled nylon. It is also treated with Marmot's new PFC-free DWR.

What is it?

Marmot's most comfortable waterproof/breathable **coating** technology ever. NanoPro's™ superior microporous structure is dynamically air permeable, allowing for air exchange to help shed excess moisture vapor without compromising the waterproofness or windproofness of the garment.

How does it work?

Marmot NanoPro™ coating utilizes a new microporous technology with a pore structure that is 30% smaller than previous generations. These very small, very densely packed pores allow for enhanced breathability while maintaining excellent waterproofness.

What are the benefits of this technology?

The most technically advanced 2.5 layer coating on the market. Marmot NanoPro™ is 43% more breathable than our previous coating technology. This advancement in fabric technology brings a new level of performance to value conscious consumers.

Marmot NanoPro™ Membrain laminate

What is it ?

The pinnacle of 2.5 layer lamination technology Marmot NanoPro Membrain™ is our most comfortable waterproof/breathable **laminate** ever. NanoPro's™ superior microporous structure is dynamically air permeable, allowing for air exchange to help shed excess moisture vapor without compromising the waterproofness or windproofness of the garment.

How does it work ?

Marmot NanoPro Membrain™ utilizes a new microporous lamination technology with a pore structure that is 200% smaller than previous generations. This pore structure is also air permeable allowing for dynamic air exchange. This air permeability combined with the enhanced breathability creates a fabric that offers incredible comfort through a wide range of actives.

What are the benefits of this technology?

Quiet, with a soft supple hand, Marmot NanoPro Membrain™ technology has created the most comfortable 2.5 Layer fabrics that we have ever offered. Up to 140% more breathable than our previous 2.5 lamination technology.

This technology is used in all of Marmot's EVODry products. EVODry products also have a permanent ECO DWR that lasts the life of the garment and is PFC free. They are also made from upcycled nylon fabric that is woven with solution-dyed yarns which virtually eliminates water from the dying process.

Breathability vs. Air Permeability

Breathability does not, as the term might imply, relate to an exchange of air. Instead it is the ability of a fabric to allow moisture vapor to pass through it. Water-vapor permeability is the "ability of a coated fabric to transmit water vapor above a specified level whilst maintaining a high degree of water penetration resistance".

Moisture vapor will move by diffusion from an area of high concentration (pressure) to one of lower concentration. Unimpeded, this happens readily. However, barriers such as fabrics reduce the rate at which this occurs. It is crucial to remember that vapor pressure drives moisture vapor.

Air permeability is intrinsically linked to breathability, but is not dependent on vapor pressure. Air permeability is "the velocity of an air flow passing perpendicularly through a test specimen". All air permeable fabrics are breathable to some extent, though not all breathable fabrics are air permeable.

Don't Confuse DWR Treatments With Waterproof/Breathable Technologies.

DWR (Durable Water **Repellency**) is a treatment that is applied to the exterior of outerwear garments. Think of it as the first line of defense from rain, snow and ice. DWR increases the surface tension of the fabric which causes water droplets to bead up and roll off, just like a freshly waxed car.

Proper Cleaning Instructions for Waterproof/Breathable Garments

Cleaning your outerwear will re-new its waterproof and breathability performance. Use a Granger or Nikwax branded detergent. Always use a warm wash and a warm rinse. **Never use fabric softners!** Two rinse cycles are recommended or wash it once with detergent and again without.

Dry in dryer on LOW heat. Do not use dryer sheets since they contain fabric softner. Remove at once; do not allow the garment to remain in the dryer (it may cause burns on the fabric if it sits on the hot metal). This will reactivate the DWR and water will again bead up and roll away.

SPORTSWEAR FABRICS & FIBERS

ORGANIC COTTON

Grown using methods and materials that have low to no impact on the environment. Third party certifications verify that organic producers use only those methods and materials allowed in organic production. Living soil is the basis of the organic farm: free of toxic chemicals for at least three years and enriched by compost and other organic matter. Less water used in dyeing conserves resources and uses less dyestuff in solution.

POLYNOSIC/MODAL

Polynosic is a processed bio-based textile made from reconstituted cellulose from the beech tree. Like other types of rayon, polynosic is soft, smooth and breaths well. Its texture is similar to cotton or silk and requires little to no ironing. Awesome fabric for travel apparel.

NYLON SUPPLEX

A man-mad fiber with a multitude of uses and well suited for clothing. Durable, excellent abrasion resistance, quick drying, wrinkle resistant and lightweight.

POLYESTER

Also a man-made fiber well suited for clothing, especially when mixed with other fibers such as cotton or nylon. Polyester fabrics are quick drying, lightweight and wick moisture.

Marmot UpCycle®

Marmot UpCycle® products minimize our impact on the environment by using natural, organic and recycled or discarded materials that would otherwise end up in landfills. Our UpCycle® fabric is made from recycled plastic…hence the name. When you recycle plastic, you get more plastic; when we UpCycle® plastic, we get fabric, a greater value and a broader use.

UPF - Protection From The Sun

Clothing is rated for its level of UV protection according to an Ultraviolet Protection Factor or UPF. This is similar to the SPF rating used with sunscreen except that it addresses UVA and UVB whereas SPF only covers UVB. Most dermatologists recommend clothing with a UPF of 25 or higher.

A garment with a UPF of 50 only allows $1/50^{th}$ of the UV radiation falling on the surface of the garment to pass through it. In other words, it blocks 49/50ths or 98% of the UV radiation.

Sportswear Technology Options from Marmot

AirExchange – fabrics woven with a soluble thread that dissolve in an enzyme wash and leave a perforation-like void for amazing breathability

Nanowick – engineered to provide advanced moisture management with accelerated wicking and evaporation

AerBarrier – extremely lightweight fabrics that are engineered for superior wind and moisture protection

QuickDry – a unique combination of constructions and yarns designed to evaporate moisture quickly and enhance drying time

Dri-Release® Cotton - a cotton/poly blend that dries 4 times faster than 100% cotton and maintains the soft hand of cotton

Dri-Release® Tencel – an even softer version of Dri-Release®

COOLMAX® – a uniquely shaped 4 channel cross section yarn that provides excellent breathability, wicking and drying

FreshGuard® is embedded in the fabric eliminating odors by stopping the attraction of odor causing bacteria

Solar Shield – built-in sun protection that does not wash out

NEW! Marmot Performance Underwear

Made with incredibly lightweight recycled polyester that won't dig in or creep up.
The moisture-wicking material keeps sweat away from your skin.
Antimicrobial treatment keeps odor at bay.
"Jewel Harness" supports and protects for men.

Life Time Warranty

We warrant every product we make to be free of manufacturer defects. Should you have a warranty issue, return the item to us. We will repair it if possible or replace all valid warranty items. Normal wear and tear, modifications, alterations, negligence, damage and use for a purpose other than for which it was designed, are not covered by the Marmot Warranty. Visit https://warranty.marmot.com to start the return process.

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Please visit www.alpinsales.com for more product knowledge!