MEMBRANE TECHNOLOGY

A shell garment’s most important weapon in the fight against wind and weather is the membrane fitted on the inside of the outer shell. This makes the garment waterproof, windproof and breathable. Modern shell clothing is mainly available with two types of membrane: hydrophilic and microporous. We use the following membranes: Dermizax®NX, Dermizax®, Bergans Element Active® and Bergans Element®. All of these are hydrophilic!

Dermizax®NX.

Dermizax® NX. Provides maximum protection during particularly demanding activities and weather conditions. The wicking ability is twice as high as for traditional membranes (30,000-50,000 g/m2/24h for 2-layer Dermizax®. Despite this, Dermizax®NX membrane maintains the same high waterproofness that Dermizax® is renowned for (minimum 20,000 millimeters).

This is the ultimate fabric for those who want a waterproof garment with the best breathability on the market as well as extremely good freedom of movement that is ideal for active use.
**DERMIZAX® & DERMIZAX®NX**
- More than 200% elasticity!
- Regulates temperature.
- Durable function.
- Easy maintenance.
- Totally waterproof.
- High wicking ability.
- Continuous development.
- No impregnation needed.

**BERGANS ELEMENT® & ELEMENT ACTIVE®**
Is Bergans of Norway’s proprietary membranes. These are highly flexible and robust membranes that:
- Always are wind and waterproof
- Retains its waterproofing and breathability over time
- Has wicking abilities
- Is washable like other textiles

**WHAT IS DEMIZAX®?**
Dermizax® is a waterproof, windproof, and wicking membrane that is specially developed to provide protection against all kinds of weather while remaining as comfortable as possible. Dermizax® membrane is a hydrophilic material that utilizes moving molecules, as opposed to most other membranes which have micropores. This offers a number of advantages and makes Dermizax® shell clothing the very best on the market thanks to its high performance and superior durability.

**BERGANS ELEMENT®**
Bergans Element® membrane is intended for moderate-intensity activity, and is specially designed for our Lifestyle & Travel collection. This collection is made up of everyday garments with technical features to withstand Scandinavian winter weather conditions. Bergans Element® membrane withstands a water column of at least 5,000 mm and has wicking abilities at least 5,000 g/m²/24. Any seam in a garment poses a risk of leakage. In garments with Bergans Element® membrane seams are completely or partially sealed with tape. The degree of taping is determined by what kind of use the product is developed for.

**ELEMENT ACTIVE®**
Bergans Element Active®-membrane are designed for moderate- to high-intensity activity in extreme weather conditions. Bergans rates 5,000 mm as the lower limit for a garment to be termed waterproof. Garments featuring a Bergans Element Active® membrane withstand a water column of at least 10,000 mm and has wicking abilities at least 10,000 g/m²/24. Any seam in a garment poses a risk of leakage. For this reason, all seams in garments featuring Bergans Element Active® are sealed by tape. This guarantees full waterproofing of the product.

**Waterproof shell clothing is often divided into three different groups according to quality:**

**3-LAYER:** Consists of three layers that have been laminated together to make one fabric. The outer layer is made from water-repellent microfiber. The membrane in the middle ensures that the garment is waterproof and wicking. The inner layer, closest to the body, consists of mesh lining that protects the membrane and provides extra durability.

**2 ½-LAYER:** Garments made from this material are principally characterized by being very lightweight and offering minimal packing volume, as well as being windproof and waterproof. The mesh lining is replaced by surface treatment on the inside of the membrane. The superior durability of our other 3-layer fabrics is not achieved, but superlight shell clothing is not intended for daily use.

**2-LAYER:** Consists of two layers that have been laminated together to make one fabric – an outer fabric in microfiber and the membrane. It also has loose mesh lining next to the body. This lining wicks moisture away from the body, protecting the membrane and retaining body heat. Since garments made from 2-layer fabric have a loose lining, they often feel warmer than 3-layer fabric.

What they all have in common is that the membrane is laminated onto the outer fabric.

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**Dermizax®, Bergans Element® and Bergans Element Active®**

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MATERIAL DESCRIPTIONS

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BERGANS ARCTIC INSULATION
Bergans ArcticInsulation is Bergans’ own-brand synthetic insulating material. It provides good wicking ability, and is lightweight and compressible. Bergans ArcticInsulation keeps you warm and dry thanks to its excellent insulating and moisture-resistant properties.

FIELDSENSOR™
Fieldsensor™ is a unique «several layer» netting lining. The inside of the lining quickly absorbs moisture which is transported to the outside of the lining. From there the moisture is spread over a large evaporation surface. The lining dries quicker and feels drier and more pleasant than ordinary lining qualities.

PERTEX® QUANTUM
Pertex Quantum® is light and strong offering a significant weight reduction without sacrificing strength and abrasion resistance. The fabric’s softness allows insulation in your sleeping bag or jacket to have more loft.

Main properties:
- Featherweight
- Maximum tear strength to weight ratio
- Maximum abrasion resistance to weight ratio
- Windproof
- Soft fabric with minimal packing volume

PERTEX® MICROLIGHT
Pertex Microlight is well balanced and offers weight reduction whilst maintaining good strength and abrasion resistance.

Main properties:
- Soft
- Windproof
- Downproof
- Durable

PRIMALOFT® GOLD INSULATION
The benchmark in performance of all synthetic insulations, PrimaLoft® Gold Insulation is the go-to choice for adventurers looking for protection in extreme conditions. Microfibers trap body heat to make this the most thermally-efficient synthetic insulation available, with water-repellency that insulates even in the wettest weather – maintaining 96% of warmth when wet. These unmatched thermal properties also feature breathability, packability and outstanding softness - consider this the pinnacle of insulation performance.

PRIMALOFT® SILVER INSULATION ECO
PrimaLoft® Silver Insulation Eco uses post-consumer recycled materials to create the highest-performing eco-friendly insulation available. The wet performance experts at the PrimaLoft® brand have combined this 70%-recycled fiber technology with a proprietary water-repellent treatment for immediate warmth without the bulk that keeps you comfortable in wet weather. Highly compressible, and with a soft feel that mimics goose down – the best-in-class eco-friendly insulation offers insulation that performs with a conscience.
The Swan label indicates which products are among the least burdensome for the environment. Therefore, this catalogue is printed by a printing company carrying the approved Swan label. The paper is naturally also an environmentally-friendly and recyclable paper.

Bergans retain the rights to change, or alter, specifications to our products at any time without notification.

Product photos: Aktiv1 / 3Sixty / Hans kristian Krogh-Hausser • Layout: Bergans Inhouse

SCHÖELLER®
Schöeller® softshell material is very soft, comfortable and elastic. It offers the optimum balance of comfort, breathability, waterproofness and windproofness. It has a soft inner layer and an extremely durable outer layer.

TECNOWOOL®
With the development of Tecnowool™ one has been successful in merging traditional organic wool with present-day modern textile materials. This has resulted in a material which strengthens the wool’s capability to warm up at the same time as it keeps its classic appearance.

PONTETORTO NOWIND
Pontetorto NoWind membrane provides great breathability and absolute windproofing. It is perfect for aerobic sports and, thanks to the versatility, it perform well in any temperature.

PONTETORTO TECNOSTRETCH
Tecnostretch is ideal for base and mid layering. The construction of the yarns make the face durable, whilst the polyester pile on the reverse has both insulation and wicking properties – in addition the spandex gives the fabric its stretch and excellent fit.

STUNNER® STRETCH
Stunner® stretch is water repellent, windproof and breathable. It is very durable and an optimal combination of performance qualities and excellent stretchability.

ORGANIC
These garments are made with organic cotton. Organically grown cotton is a much more environmentally friendly way to grow cotton, both for the environment and for the cotton farmers. This cotton is cultivated without the use of hazardous chemicals, chemical pesticides or artificial fertilizers.

ECODEAR®
Ecodear™ Polyester uses materials that are 30% plant based. Fossil fuels are substituted with plant based material without sacrificing performance or recyclability. The plant based resource is waste molasses, a by-product of the sugar production. It is an environmental friendly product that helps to reduce carbon dioxide emissions, conserve fossil oil and can be recycled.

FIELDSENSOR™ BYOKAN
Single jersey “Air Bridge” technology with outstanding moisture management and ultra-light weight. The wicking ability and diffusion area are double of regular Fieldsensor™. It keeps your skin dry, has high durability and feels soft and smooth.

BLUESIGN®
Bergans is a bluesign® system partner. The bluesign® system is the solution for a sustainable textile production. It eliminates harmful substances right from the beginning of the manufacturing process and sets and controls standards for an environmentally friendly and safe production. This not only ensures that the final textile product meets very stringent consumer safety requirements worldwide but also provides confidence to the consumer to acquire a sustainable product.

We have adopted bluesign® Restricted Substance List (RSL) which is regularly updated by bluesign® chemical experts.

www.bluesign.com