

# DOWN

Fine threads for  
light fillings





When it comes to down jackets, the perfect seam is critically important. Only the right sewing thread can prevent feathers and down from migrating out through the seam.

### DOWN-PROOF SEAMS

# PERFECT INSULATION

Light as a feather, warm and soft to the touch: During a fishing trip in the winter of 1936, the American adventurer Eddie Bauer almost died from hypothermia. Following this episode, he went on to design the down jacket. The principle developed by Bauer is still valid today: pockets of down separated by quilted seams, which should be warm yet as light as possible. Nothing feels so airy and warm at the same time as a high quality down jacket.

However, this is only possible by using the best materials and processing methods. Premium jackets are usually made with a pure down fill, which makes them very wearable and comfortable. More affordable jackets on the other hand are usually filled with a mix of down and feathers. This is cheaper and is less efficient at insulating heat because of the feathers. The hard quills can also penetrate and migrate out of the fabric or the seam holes. The best way to prevent this is therefore a down-proof seam. So that the filling stays where it should, we have developed very fine sewing threads for this specific purpose.



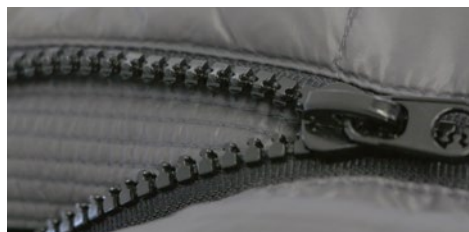
### Pay attention to the mix

Down jackets with a high down content have a better quality. The percentage of feathers should not exceed 10%. When purchasing a high quality down jacket, you often receive a small sachet with a sample of the filling so that you can see what it is made of.



## WHAT TO WATCH OUT FOR

From the Michelin man look to a refined and feather-light style: while current fashion trends determine the appearance of high-value down jackets, their quality also depends on the way in which they are processed. The position and shape of the individual pockets of down or of a mix of down and feathers can vary according to



the design. Since this determines the quality of the insulation, it is important to prevent the filling from migrating. The most vulnerable parts in this regard are the seam and the holes of the stitching. For this reason, it is very important to select the correct sewing threads and needles during production.

## Our recommended sewing threads

When selecting a sewing thread, it is important to ensure that the threads are not hairy. Otherwise, down and feathers can hook onto the fine hairs,

making it easier for them to escape. Fine threads make it possible to use finer needles, which reduces the size of the holes that they make.



### MARA 120

**AS NEEDLE AND  
BOBBIN THREAD**

For a seam with a uniform and wonderful appearance Mara 120 is our highly fine and uniform sewing thread made of 100% polyester. Produced with our unique Micro Core Technology®, Mara is highly tear-resistant and is almost hairless.

The fine and uniform cross-section allows the use of particularly fine sewing needles with low thread tension. Micro loops prevent down and feathers from passing through the holes of the stitches.



### TERA 60 WA

**AS NEEDLE AND  
BOBBIN THREAD**

Feathers and down do not affix to the thread because Tera 60 WA, a 100% polyester continuous filament, has a special construction which makes it extremely smooth and even. A special

water-repellent finish reduces the risk of down and feathers escaping since they cannot hang onto the thread. Therefore, they stay right where they belong: inside.



The difference between Mara (left) and Tera (right) is primarily in their appearance. While seams on down jackets sewn with Mara 120 look like cotton, Tera 60 WA has a more plastic look because of its smoother surface.

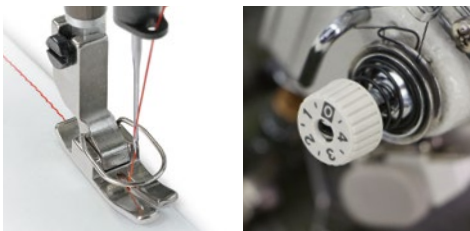


**Tip:**

Our Piuma 140 is perfect as a knitting thread for the production of the collars and cuffs of down jackets.

## More processing tips

When producing down jackets, the length of the stitch should ideally be equal to 4 ½ stitches per cm at a machine speed of 3,500 to 3,800 rpm (revolutions). Smaller stitches mean more stitch holes, because of the even thread tension, feathers are less likely to migrate.



### MACHINE TENSION

The machine tension should be as low as necessary to prevent a high thread tension. The threads must also interlace between the layers so that holes in the material are sealed by the interlacing.

### SEWING NEEDLE

The size of the needle should be as fine as possible to avoid damage to the material as well as to keep the stitch holes as small as possible. This prevents the feathers from penetrating through the seam hole. In general, it is advisable to check each fabric before processing for sewability and the correct needle insertion.

## ABOUT SEWING TECHNOLOGY SERVICE OF A&E GÜTERMANN

With our technical expertise in sewing thread, we can help you in all matters related to the use of down. Get in touch! We would be delighted to be of service.



**Get in touch:**

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**SEAMS UNLIMITED**

# A SPECIALISED ALL-ROUNDER

**The name Gütermann has stood for premium quality for over 150 years in the textile industry, that means perfect seams – through uniformity, a silky shine, a smooth texture, tear resistance and maximum flexibility. To offer our customers sustainable support, we also need to be flexible in how we approach the requirements of today's market and current fashion trends.**

We continuously adapt our products to meet these requirements. We produce sewing thread products for the consumer, industry and automotive sectors which are precisely designed to meet the needs of our customers. They are carefully developed by our textile specialists so that they always have the same quality. When manufacturing processes reach their limits, we take things to the next level, we optimise our technologies and keep up with the latest developments in research. That's how innovation happens. And the quality promise of A&E Gütermann remains.

Your perfect seam starts with us. In the past, workers worked in isolation on their specific craft. In our plants in Germany and Slovenia, highly specialised textile technologists, engineers, chemists and dyers work together to ensure that all the details are coordinated.

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## **Saving water in the textile industry**

A&E Gütermann aims to reduce water consumption in all of its sites worldwide, many of our plants process wastewater into drinking water. In addition, a hydropower plant provides the water supply for all our production needs in Gutach im Breisgau.

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## **A strong connection – Around the world**

Since our merger as A&E Gütermann in 2014, we support your value chain worldwide. The smooth flow of materials and information minimizes your costs and creates transparency.



