

Workwear



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Workwear are clothes that are tailored to the individual needs of different jobs, as regards their function, fit, or workmanship. Today they are an important segment in clothes production. For many, workwear just means blue coveralls but this is only a small section of this large field. Blouses, blazers, jackets, trousers ... the number of models is huge, and all are designed differently. Craftsmen, nurses, kitchen and service staff, postal workers, etc., they all need workwear and want their individual requirements fulfilled.

Design and production of workwear has changed over the past years. Today, workwear not only represents practical and functional clothing, but it is also an important instrument demonstrating corporate identity. Often, fashionable details are desired as well. In addition, hygienic and physiological aspects have gained in significance. The person wearing workwear has to feel comfortable and the clothes must survive many laundering cycles.

Competition among the suppliers of workwear is fierce. The order volumes are often huge. New uniforms for the postal service or police force mean large volumes and thus large orders. That means that every cent counts. Quality and profitability are of great importance here. They are decisive for the success or failure in this market. The supplier that produces the goods meeting the requirements at the lowest possible price will make the deal. Defects in quality and premature wear are the cause of annoyance and complaints – and they reduce profitability.

Sewing of Workwear

Sewing thread

The quality of the sewing thread is decisive for seam quality and thus for workwear's service performance. Seam abrasion resistance, seam stability, and the seam elasticity of elastic materials must meet requirements. And the wear and tear during use is often extreme: Permanent abrasion and great tensile stress in crosswise and lengthwise direction to the seam are rather the rule than the exception. Worn out or broken seams is the consequence if the seam quality is low here.

The following product lines from the AMANN range have proven their suitability for the production of workwear:

SABAC – The high-performance thread

SABAC, a corespun thread made of 100% polyester has the best possible features for meeting the requirements of workwear:

- high tensile strength
- good abrasion resistance
- keeps looking good even when exposed to abrasion
- well-balanced elongation behaviour
- best care properties

In addition, SABAC features a high sewing performance and is suited for all machines and automated sewing machines. Thus, this article combines best sewing performance and optimal seam quality – a perfect combination for workwear. Today a large share of the workwear is being sewn with fully synthetic thread constructions. The advantages of these 100% polyester concepts are given more and more attention. SABAC is available in a wide range of ticket numbers and in numerous colours.

RASANT – The functional thread

This cotton/polyester cospun thread has always been of great importance in workwear production. The blue coveralls have been made exclusively with this cotton cospun thread for many years. The reason has been its high thermal resistance, which can be beneficial when sewing tightly-woven heavy materials of the type that are used for the blue coveralls for example. Needle temperatures of over 250°C, which are easily reached when sewing medium-heavy workwear, contain the risk of thermal damage to sewing thread and material. Using RASANT, the sewing thread is somewhat protected from high-temperature needles by its cotton layer. But be careful: the layer does not cover the polyester core completely, so slight melting is still possible. If this is not noticed during sewing, hidden seam damage can occur, which will show later during use and can lead to broken seams. Many machines used for the production of workwear today are equipped with needle cooling facilities, so this issue has lost some of its importance.

In addition to its high thermal resistance, RASANT generally features an outstanding sewing performance. RASANT easily fulfils the high demands of automated multidirectional sewing assemblies. RASANT's ticket number and colour range was adapted to the needs of workwear production.

PAX^X – The economic thread

PAX^X is the cost-efficient alternative to the above two cospun threads SABA^C and Rasant. PAX^X is 100% polyester and features an air-jet textured special construction. Compared with spun or continuous filament threads, PAX^X features an almost fault-free quality. Thickened or spliced areas and other annoying faults are reduced to a minimum – plus there's no fibre abrasion during processing.

PAX^X has excellent sewing characteristics and guarantees good seam quality. PAX^X is available in the ticket numbers 35, 50, 80, and 120.

To determine the ticket numbers of SABA^C, RASANT and PAX^X to be used you must consider the material and the sewing operation; it can vary with cospun threads from fine count 150 to the coarse ticket number 25. As a rule, we recommend using a rather coarser ticket number than you would use in the production of fashion clothes because of the high stress in later use. For example, using SABA^C 150 for closing seams on trousers is unacceptable, even if this thread is used for fine women's wear trousers.

If blind stitching is used, SERAFIL 120/2 or 200/2 will be suitable.

For seams with extreme exposure to abrasion, the use of polyamide threads is required to some extent. STRONGFIL/ONYX offers the best conditions here for optimal seam quality.

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Overview of additional processing parameters:

- Needle size** Nm Size
80–120 12–19
Depends on material, which varies extremely in the field of workwear, and on number of plies. For general recommendations for the different sewing threads, see Focus 1, page 123
- Needle point** Round or ball points; for example R or FFG/SES.
Depends on material. Delicate materials or knitted fabrics should generally be sewn with a ball point needle.
- Stitch type** All common stitch types in the clothing industry; predominantly lockstitching (301), double chainstitching (401), overedge chainstitching (502, 503, 504, 505), and sometimes blind stitching (stitch type 103 or 105).
Due to the often high requirements as regards productivity, safety stitch seams are often used in workwear production. For the same reason, double chainstitching is preferred over lockstitching where possible.
- Machine** Machines suited for the above stitch types – to increase productivity automated sewing machines are used when possible.
These machines are as a rule equipped for sewing fine- to medium-weight materials. When processing tighter-, heavier-woven materials, thermal damage occurs quite frequently, depending on the number of plies. For prevention, we recommend using sewing machines with air needle cooling.

Stitch density Approx. 4 stitches/cm for closing seams: higher stitch densities can be necessary for special sewing operations to improve seam stability, or for elastic materials to increase seam elasticity.

Special sewing recommendations:

For preventing thermal damage to the sewing thread and material with tightly-woven heavy materials, it may be necessary to reduce the sewing speed.



By the way: Embroideries on workwear: Workwear with an embroidered company logo supports company's corporate identity. An embroidered logo looks more valuable and is much more hard-wearing than a printed logo. Heavy mechanical stress, a great deal of dirt and stains, and the resulting intense wash treatments require enduring and the fastness of polyester embroidery threads like ISACORD or ISALON from AMANN. Their high level of light fastness and colour fastness up to 95° C and their chlorine bleach fastness, which can never be reached with viscose or cotton, are properties that allow them to withstand extreme stress such as in the leasing segment (exposes garments to extreme laundering conditions). Optimal elongation properties and a high level of abrasion resistance allow even very complex embroideries on surfaces exposed to strong mechanical stress. However, because of the many laundering cycles and resulting abrasion, satin stitches should be no longer than 4–5 mm.