

**PRODUCT RANGE FOR
OUTDOOR APPLICATIONS**

A person wearing a dark beanie and a green jacket is sitting on a rocky outcrop, looking out at a sunset over the ocean. An orange tent is pitched on the left side of the frame, with its entrance open. The scene is set on a rocky coastline with a large rock formation on the left and the ocean in the background. The sky is filled with soft, colorful clouds from the setting sun.

OUTDOOR APPLICATIONS

HAVE YOU EVER WONDERED WHAT OUTDOOR TEXTILES HAVE TO WITHSTAND?

From intense sunlight and heavy rain to snow, humidity and fluctuating temperatures — outdoor textile applications are exposed to some of the harshest environmental conditions imaginable. Constant weathering places exceptionally high demands on every material component, requiring long-lasting durability, reliability and resistance under continuous outdoor exposure.

To ensure long-lasting performance, sewing and embroidery threads used in outdoor applications must provide exceptional resistance to weathering, mechanical stress and environmental influences. Reliability, color fastness and seam durability are essential to maintain both functionality and aesthetics over time.

With its specialized product range for outdoor applications, AMANN offers high-performance sewing and embroidery threads engineered to meet these demanding requirements. Designed for durability and resilience, AMANN solutions help ensure outstanding seam performance and lasting quality in challenging outdoor environments.

UV resistance plays a decisive role in the performance of outdoor textiles. Continuous exposure to solar radiation can weaken conventional sewing threads, leading to reduced seam strength, fading and premature material degradation. High-quality UV-resistant sewing threads are therefore essential to preserve the integrity, safety and visual appear-

ance of outdoor products throughout their service life. AMANN outdoor solutions are specifically developed to deliver excellent UV stability, ensuring reliable seam performance and long-term durability even under intense and prolonged sun exposure.

GENERAL APPLICATION FIELDS:

- Maritime applications, e.g. sails, boat covers and seats
- Shading systems, e.g. awnings, blinds
- Outdoor furniture, e.g. textile lounges
- Sports equipment, e.g. golf bags, backpacks
- Covering systems, e.g. tents, pool covers



CERTIFIED TESTING FOR OUTDOOR APPLICATIONS

We work very closely with the renowned Hohenstein Laboratories to test weather resistance and UV resistance. Further information on water repellency can be found on pages 10–11.

Weathering test according to DIN EN ISO 4892-1 and 4892-2

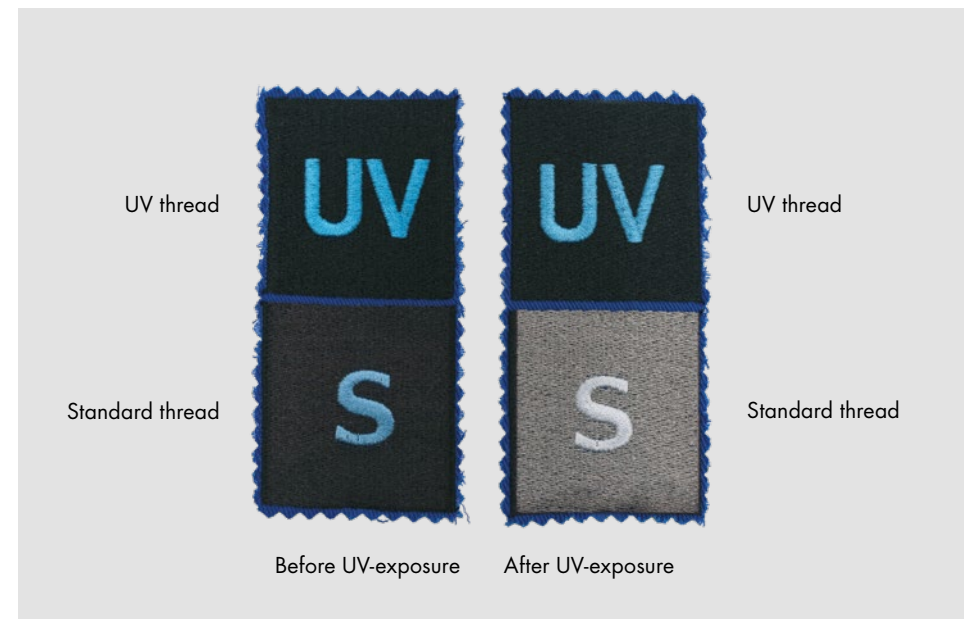
The results by Hohenstein Laboratories confirm: **Outdoor-Pro** performs excellently in the weathering test.

- Examination according to DIN EN ISO 12402-7 contains artificial weathering according to ISO 4892-1 and ISO 4892-2
- Simulation of the influences of various weather conditions (insolation, rain, fog), as well as simulation of daytime and nighttime
- Test duration: approx. 300 h, test objects: all relevant sizes
- Test criteria: maximum tensile force, elongation at maximum force, colour fastness
- Furthermore, Outdoor-Pro has succeeded in cold storage at -30°C

Light fastness test according to DIN EN ISO 105-B06

The test results confirm: **AMANN UV-resistant sewing threads** offer excellent colour stability under the influence of light and heat.

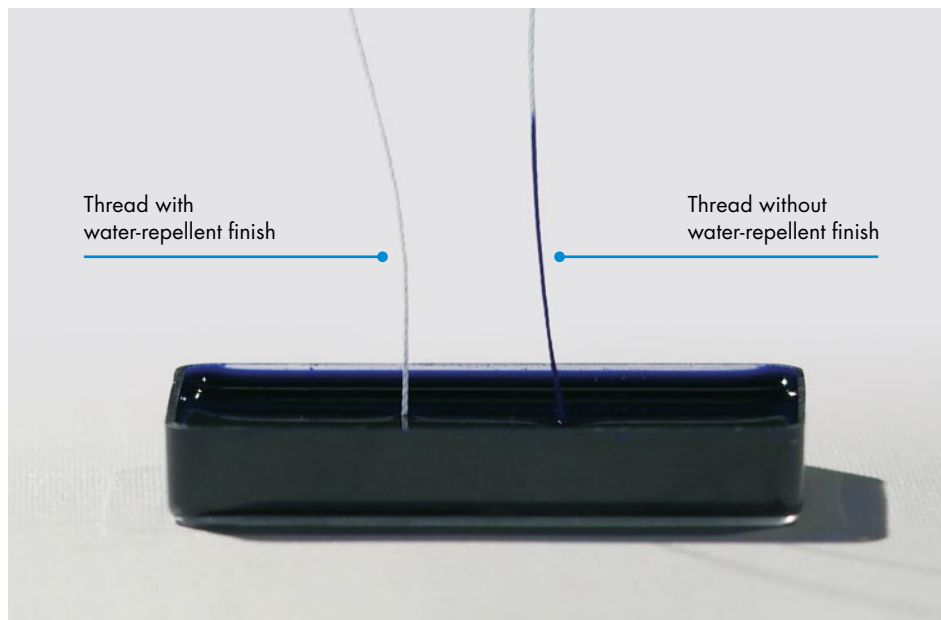
- Examination according to DIN EN ISO 105-B06, condition 3
- Simulation of artificial daylight and heat, comparable to natural sunlight exposure
- Test duration: 1, 3 and 5 cycles; one cycle corresponds to approx. 60 h
- Test criteria: evaluation of colour fastness, colour change and resistance to fading
- The result demonstrates the high colour stability of AMANN threads for demanding applications exposed to extreme UV radiation



Water-repellency test

AMANN's water-repellent threads get tested using the ink test for water-repellency.

- A seam sample is brought into contact with a water-based ink solution that highlights capillary transport along needle holes and sewing threads.
- The ink is applied under controlled conditions (no significant pressure) so that movement is driven mainly by capillary action within the stitch structure.
- Water repellency is evaluated by observing how far and how fast the ink wicks along the seam and whether it penetrates through the fabric layers.



Product properties:

- Whether pool covers, tents, awnings, boat covers, outdoor furniture or shoes – Outdoor-Pro is the ideal sewing thread for outdoor products
- Equipped with our PFAS-free water-repellent finish as standard
- Brilliant colours, textile look and feel
- Specially suited for multidirectional sewing
- Excellent UV resistance due to premium dyestuffs
- Weathering test according to ISO 4892-1 and ISO 4892-2 (DIN EN ISO 12402-7) and cold storage at -30°C
- Certified according to OEKO-TEX® STANDARD 100 product class I (baby articles), annex 6

Ticket no.	Tex no.	Needle size min (in Nm)	Needle size min (in No.)	Make-up
10	270	200	25	1,400 m FS
15	210	180	24	1,900 m FS 8,500 m FS
20	135	140	21	1,500 m FS 3,000 m FS
30	90	110	18	2,300 m FS
40	70	100	16	5,500 m FS
60	45	90	14	4,000 m FS

FS/KS = 

Raw material:

- Polyester

Construction type:

- Continuous filament, bonded

Main application:



- Awnings
- Boat covers and sails
- Outdoor furniture
- Tents

Other applications:

- Shoes & Accessories

Product properties:

- High-performance bonded special sewing thread for outdoor applications
- Extremely durable
- Resistant to untwisting and therefore suited for multidirectional sewing
- Outstanding UV resistance due to special dyestuffs
- Weathering test according to ISO 4892-1 and ISO 4892-2

Ticket no.	Tex no.	Needle size min (in Nm)	Needle size min (in No.)	Make-up
6	500	240	27	1,700 m FS
9	350	210	26	1,700 m FS
12	240	180	24	1,800 m FS
15	210	170	24	2,400 m FS
18	150	150	23	2,600 m FS
20	135	130	21	1,600 m FS 3,200 m FS
25	105	120	19	3,000 m FS
30	90	110	18	2,300 m FS
40	70	90	14	4,600 m FS
60	45	80	12	5,000 m FS

FS/KS = 

Raw material:

- Polyester

Construction type:

- Continuous filament, bonded

Main application:



- Awnings
- Boat covers and sails
- Outdoor furniture
- Tents

Other applications:

- Home interior





DISCOVERY



Product properties:

- The special machine embroidery thread for long-lasting fade-resistant embroidery
- Superior UV resistance due to premium dyestuffs with UV absorber
- Outstanding embroidery performance for maximum productivity
- Durable with excellent abrasion resistance
- Excellent colour fastness, Pro-Care certified for industrial laundry according to DIN EN ISO 15797
- Made from 100% recycled polyester
- Available as GRS certified
- The ideal choice for embroidery on products exposed to extreme sunlight
- Certified according to OEKO-TEX® STANDARD 100 product class I (baby articles), annex 6

Ticket no.	Tex no.	Needle size min (in Nm)	Needle size min (in No.)	Make-up
40	27	65	9	5,000 m KS

FS/KS = 

Raw material:

- Polyester, 100% recycled

Construction type:

- Continuous filament, trilobal

Main application:



- UV-resistant embroidery on any outdoor application

Other applications:

- Apparel
- Shoes & Accessories
- Home Interior
- Techtext

NOTES

A close-up photograph of a green, textured fabric, possibly a tent or outdoor gear, covered in numerous water droplets. The droplets are of various sizes and are beading up on the fabric's surface, demonstrating its water-repellent properties. The lighting is bright, creating highlights on the droplets and the fabric's weave.

WATER- REPELLENCY

HOW DOES A THREAD BECOME WATER-REPELLENT?

Water-repellency is a critical performance requirement in outdoor textiles, particularly when it comes to seam integrity. While modern fabrics are often equipped with hydrophobic finishes or coatings, the seam area remains a structurally complex zone where water can still penetrate the system.

A key physical mechanism behind water ingress in seams is the capillary effect. Needle perforations created during sewing form micro-channels that can transport water through capillary action, especially under prolonged exposure or hydrostatic pressure. Even when the fabric surface is water-repellent, these pathways can significantly reduce overall barrier performance if not properly controlled.

Effective water-repellent seam construction therefore depends on minimizing capillary transport. This is achieved through the precise interaction of fabric density, coating systems, needle geometry, stitch formation and sewing thread properties. Each parameter influences how strongly capillary forces can develop along the seam line.

The sewing thread plays a central role in this system. Its structure and surface characteristics can reduce wicking along the stitch channel and help stabilize

the seam's water-repellent performance, supporting the overall barrier function of the textile construction.

To further enhance seam performance, AMANN offers its WRe finish — a water-repellent, eco-friendly solution designed for modern outdoor textile applications. WRe is developed without the use of harmful chemicals and is completely PFAS-free, supporting safer and more sustainable textile production.

At the same time, the finish delivers excellent functional performance, ensuring best-in-class water-repellent properties without compromising sewing performance or process reliability. This combination allows manufacturers to achieve highly durable seams while maintaining efficiency in production.

In addition, WRe meets strict ecological and safety requirements and is certified according to OEKO-TEX® Standard 100, annex 6. This makes it a reliable choice for applications where performance, sustainability and compliance are equally important.

AMANN offers following brands for outdoor applications with WRe finish:

- Serafil WRe, Serafil Recycled WRe
- Onyx WRe
- Strongcore WRe
- Serafil fine WRe, Serafil fine Recycled WRe
- Saba WRe



Thread without water-repellent finish:
Capillary effect



Thread without water-repellent finish:
Soaked thread



Water-repellent thread:
No capillary effect



Water-repellent thread:
No water absorption

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