AMANN GROUP

SPECIAL THREADS FOR DEMANDING PROTECTION & DEFENSE APPLICATIONS

ABOUT AMANN

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Innovation since 1854

Since 1854, AMANN has been one of the leading global producers in the field of high-quality sewing and embroidery threads. Its technical expertise, reliability and flexibility in production and service makes AMANN a strong partner worldwide.
More than 2,800 motivated employees in more than 100 countries worldwide make AMANN's success possible. AMANN Group exclusively produces at its own production sites. The company headquarters are located in Bönnigheim, Germany.

Commitment to the precepts of the UN global compact

As a global company, AMANN has made the conscious decision to enter into the UN Global Compact. "The United Nations Global Compact is the world's biggest and most important initiative for responsible corporate management. Based on ten universal principles and the Sustainable Development Goals, it pursues the vision of an inclusive and sustainable global economy to the benefit of all people, communities and markets, today and in the future." [1]

It is AMANN's ambition not only to be a pioneer in terms of high-quality, sophisticated products, but also in activities in the spirit of sustainability.

Learn more about our sustainable achievements and targets in our annually published Sustainability Report.

Certification & safety

Ensuring our high quality and environmental standards is an essential part of the AMANN philosophy. That is why we comply with the following internationally recognised certifications and standards:

- Quality management system ISO 9001
- Automotive quality management system IATF 16949
- Environmental management system ISO 14001
- Higg Index Facility Environmental Module (Higg Index FEM)
- Higg Index Facility Social and Labour Module (Higg Index FSML)

Product certifications

AMANN products are certified to meet stringent requirements for chemical safety, functional performance and the use of sustainable materials, ensuring reliability and compliance across all applications.

- REACH: AMANN products are REACH-compliant, confirming they are safe for human health and the environment.
- STANDARD 100 by OEKO-TEX®: This certification guarantees that AMANN products are tested for harmful substances. Many products meet the stricter Appendix 6 criteria, ensuring advanced consumer and environmental safety.
- DIN EN ISO 15797: This is the international standard that defines test methods for evaluating workwear and protective clothing in industrial washing and finishing processes, and AMANN threads are certified to meet these requirements for maximum durability and reliability.
- PRO Care certification: For industrial laundry, PRO Care by Hohenstein Laboratories certifies that textiles and sewing components, such as AMANN threads, can withstand repeated industrial washing and finishing processes while maintaining safety, performance, and durability.
- Cradle to Cradle Certified® Gold: AMANN Lifecycle products are Cradle to Cradle Certified® Gold for sustainable design, focusing on material health, recyclability and minimal environmental impact.
- Global Recycled Standard (GRS): The products of AMANN's Recycled line are GRS-certified, verifying the use of recycled materials and adherence to responsible social and environmental practices.

[1] German Global Compact Network office: United Nations Global Compact

PROTECTION & DEFENSE

REQUIREMENTS MATRIX

	Flame and heat protection	Ballistic & cut protection	Specialized performance	Extreme weather & UV protection	Maximum abrasion resistance	Standard applications
Product						
A-tech	X					
A-tech CS	X					
Ac-tech	X					
N-tech	X					
N-tech CS	X					
Nc-tech	X					
K-tech	X	X				
Kc-tech	X	X				
Rasant IR			X			
Xtreme-tech			X	X	X	
Outdoor-Pro				X		
Serabond				X		
Onyx					X	
Strongbond					X	
Strongcore					X	
Saba						X
Serafil						X
Sabatex						X
Rasant						X
Isacord Recycled						X

= Main feature = Additional feature

FLAME & HEAT PROTECTION

AMANN products for flame & heat protection:

- A-tech
- A-tech CS
- Ac-tech
- N-tech
- N-tech CS
- Nc-tech
- K-tech
- Kc-tech

FLAME & HEAT PROTECTION

For applications requiring protection against heat and flame, sewing threads made from meta- or para-aramids are a proven solution. They neither burn nor melt and only carbonize or decompose after prolonged exposure to high temperatures. Once the ignition source is removed, they are self-extinguishing. As a result, aramid sewing threads form an essential part of many specifications and regulations for protective clothing used by military, police, fire brigade and many other profession sectors. They also support material consistency between the sewing thread and the sewn fabric, contributing to the overall protective performance of the garment.

All AMANN aramid products have been examined according to the DIN EN ISO 15025 test standard. This standard evaluates the flame spread behaviour of textile materials when exposed to a defined ignition source and is widely used in the assessment of protective clothing. For defense and protection applications, compliance with this standard helps ensure that seams contribute to the overall flame-resistant performance of the finished product.

Thread requirements

- Flame resistance
- Heat resistance
- High strength
- Abrasion resistance
- Thermal durability
- Wash durability

Typical applications

- Combat uniforms
- Flight suits
- Pilot clothing
- Tactical uniforms
- Protective coveralls
- Protective jackets
- Protective gloves
- Base layers

A-tech

Product properties:

- Meta-aramid special sewing & embroidery thread for flame-retardant and heat-protective applications
- Self-extinguishing and non-melting
- The powerful alternative to Nomex®
- Permanent temperature resistance up to approx. 200°C
- Decomposition temperature at approx. 370°C
- Burning behaviour tested according to DIN EN ISO 15025

Ticket no.	Tex no.	Needle size min (in Nm)	Needle size min (in No.)	Make-up
70	40	80	12	1,000 m Co 5,000 m Co

Co =

Raw material:

- Meta-aramid

Construction type:

- Schappe spun

Main application:

- Uniforms & apparel: Combat uniforms, tactical uniforms, flight suits
- Protective Systems: flame-resistant clothing, protective gloves, knee/elbow protection

Certifications:

OEKO TEX®
STANDARD 100
96.0.8810
Hohenstein

A-tech CS

Product properties:

- Meta-aramid special sewing & embroidery thread for flame-retardant and heat-protective applications
- Self-extinguishing and non-melting
- The powerful alternative to Nomex®
- Permanent temperature resistance up to approx. 200°C
- Decomposition temperature at approx. 370°C
- Burning behaviour tested according to DIN EN ISO 15025

Ticket no.	Tex no.	Needle size min (in Nm)	Needle size min (in No.)	Make-up
40	75	100	16	3,000 m Co
70	40	80	12	5,000 m Co
120	25	70	10	5,000 m Co

Co =

Raw material:

- Meta-aramid

Construction type:

- Cut staple spun

Main application:

- Uniforms & apparel: Combat uniforms, tactical uniforms, flight suits
- Protective Systems: flame-resistant clothing, protective gloves, knee/elbow protection
- Identification: embroidered badges, rank insignia, name tapes

Certifications:

OEKO TEX®
STANDARD 100
96.0.8810
Hohenstein

Ac-tech

COMING SOON

Product properties:

- Meta-aramid special sewing & embroidery thread for flame-retardant and heat-protective applications
- Self-extinguishing and non-melting
- The powerful alternative to Nomex®
- Permanent temperature resistance up to approx. 200°C
- Decomposition temperature at approx. 370°C
- Burning behaviour tested according to DIN EN ISO 15025

Ticket no.	Tex no.	Needle size min (in Nm)	Needle size min (in No.)	Make-up
60	45	100	16	2,000 m FS

FS/KS =

Raw material:

- Meta-aramid

Construction type:

- Continuous filament

Main application:

- Uniforms & apparel: Combat uniforms, tactical uniforms, flight suits
- Protective Systems: flame-resistant clothing, protective gloves, knee/elbow protection
- Load-Carriage & Storage Systems: backpacks, tactical vests, equipment bags
- Footwear & Personal Gear: combat boots, protective footwear, gloves

Certifications:

OEKO TEX®
STANDARD 100
96.0.8810
Hohenstein

N-tech

Product properties:

- High-performance meta-aramid special sewing and embroidery thread
- For flame-retardant and heat-protective applications
- Self-extinguishing and non-melting
- Permanent temperature resistance up to approx. 200°C
- Decomposition temperature at approx. 370°C
- Burning behaviour tested according to DIN EN ISO 15025

Ticket no.	Tex no.	Needle size min (in Nm)	Needle size min (in No.)	Make-up
40	75	100	16	3,000 m Co
70	40	80	12	10x1,000 m XW 5,000 m Co

Co = XW =

Raw material:

- Nomex® DuPont™ meta-aramid

Construction type:

- Schappe spun

Main application:

- Uniforms & apparel: Combat uniforms, tactical uniforms, flight suits
- Protective Systems: flame-resistant clothing, protective gloves, knee/ elbow protectio

Certifications:

OEKO TEX® STANDARD 100 96.0.8810 Hohenstein

PRO

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N-tech CS

Product properties:

- High-performance meta-aramid special sewing and embroidery thread
- For flame-retardant and heat-protective applications
- Self-extinguishing and non-melting
- Permanent temperature resistance up to approx. 200°C
- Decomposition temperature at approx. 370°C
- Burning behaviour tested according to DIN EN ISO 15025

Raw material:

- Nomex® DuPont™ meta-aramid

Construction type:

- Cut staple spun

Ticket no.	Tex no.	Needle size min (in Nm)	Needle size min (in No.)	Make-up
70	40	80	12	10x1,000 m XW 5,000 m Co
120	25	70	10	5,000 m Co

Co = XW =

Main application:

- Uniforms & apparel: Combat uniforms, tactical uniforms, flight suits
- Protective Systems: flame-resistant clothing, protective gloves, knee/elbow protection
- Identification: embroidered badges, rank insignia, name tapes

Certifications:

OEKO TEX® STANDARD 100 96.0.8810 Hohenstein

PRO

c UL us

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Nc-tech

Product properties:

- Meta-aramid special sewing thread for highest requirements in flame-retardant and heat-protective applications
- Self-extinguishing, non-melting, robust and extremely durable
- Permanent temperature resistance up to approx. 200°C
- Decomposition temperature at approx. 370°C
- Burning behaviour tested according to DIN EN ISO 15025

Ticket no.	Tex no.	Needle size min (in Nm)	Needle size min (in No.)	Make-up
20	140	120	19	1,000 m FS
34	95	120	19	1,500 m FS
40	70	110	18	2,000 m FS
60	45	100	16	3,000 m FS

FS/KS =

Raw material:

- Nomex® DuPont™ meta-aramid

Construction type:

- Continuous filament

Main application:

- Uniforms & apparel: Combat uniforms, tactical uniforms, flight suits
- Protective Systems: flame-resistant clothing, protective gloves, knee/elbow protection
- Load-Carriage & Storage Systems: backpacks, tactical vests, equipment bags
- Footwear & Personal Gear: combat boots, protective footwear, gloves

Certifications:

OEKO TEX®
STANDARD 100
96.0.8810
Hohenstein

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BALLISTIC & CUT PROTECTION

AMANN products for ballistic & cut protection:

- K-tech
- Kc-tech

BALLISTIC & CUT PROTECTION

In ballistic- and cut-protective applications, seams must support highly engineered protective materials without becoming a weak point in the construction. Specialized sewing threads help maintain seam integrity under high mechanical stress and contribute to the durability and reliability of protective garments and equipment.

Thread requirements

Sewing threads for ballistic- and cut-protective applications may require:

- Very high tensile strength
- High cut and abrasion resistance
- Excellent tear resistance
- High seam strength
- Low elongation and dimensional stability
- Reliable performance under extreme mechanical stress
- High fatigue resistance
- Long-term durability

Typical applications

- Ballistic protective clothing
- Body armour and ballistic vest carriers
- Plate carriers
- Stab-resistant garments
- Riot gear
- Protective tactical vests
- Cut-resistant combat garments
- Protective gloves
- Protective equipment components

K-tech

Product properties:

- Para-aramid special sewing thread for applications with high requirements on cut protection
- Also suitable for flame and heat protection
- Permanent temperature resistance up to approx. 170°C
- Decomposition temperature at approx. 425°C
- Burning behaviour tested according to DIN EN ISO 15025

Raw material:

- Kevlar® DuPont™ para-aramid

Construction type:

- Schappe spun

Ticket no.	Tex no.	Needle size min (in Nm)	Needle size min (in No.)	Make-up
35	80	120	19	3,000 m Co
50	60	110	18	3,000 m Co
75	40	100	16	5,000 m Co

Co =

Main application:

- Protective Systems: ballistic vest carriers, stab-resistant garments, protective gloves

Certifications:

OEKO TEX®
STANDARD 100
96.0.8810
Hohenstein

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Kc-tech

Product properties:

- Extremely high-performing para-aramid special sewing thread for cut protection
- Also suitable for heat-protective applications
- Self-extinguishing and non-melting
- Permanent temperature resistance up to approx. 170°C
- Decomposition temperature at approx. 425°C
- Burning behaviour tested according to DIN EN ISO 15025

Raw material:

- Kevlar® DuPont™ para-aramid

Construction type:

- Continuous filament, bonded

Ticket no.	Tex no.	Needle size min (in Nm)	Needle size min (in No.)	Make-up
22	135	130	21	ca. 500 g/ 3,000 m FS

FS/KS =

Main application:

- Protective Systems: ballistic vest carriers, stab-resistant garments, protective gloves

Certifications:

OEKO TEX® STANDARD 100 96.0.8810 Hohenstein

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SPECIALIZED PERFORMANCE

AMANN products for specialized performance:

- Rasant IR
- Xtreme-tech with Dyneema®

SPECIALIZED PERFORMANCE

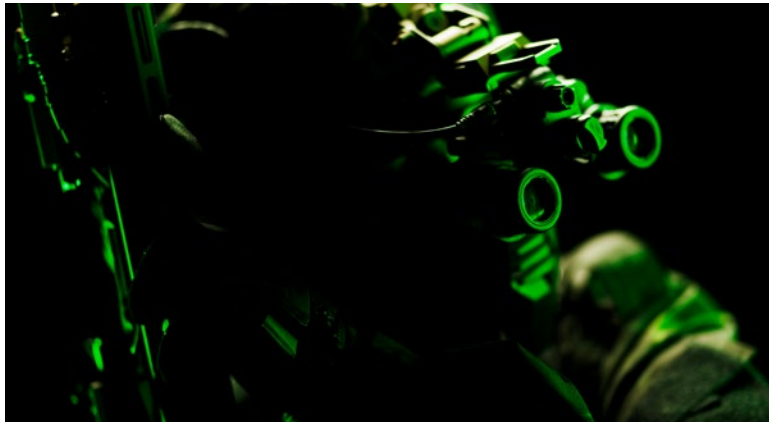
Some defense and protection applications require more than standard seam performance. Whether the challenge is infrared compatibility, load-bearing strength or precise identification through embroidery, specialized sewing and embroidery threads help meet highly specific functional requirements. For applications with NIR/IR requirements, the required reflectance values and colour specifications must be clearly defined in advance. To identify the right thread colours and IR values, the relevant customer specification, target colour shade, camouflage or fabric reference, and required NIR/IR tolerance range are needed.

Thread requirements

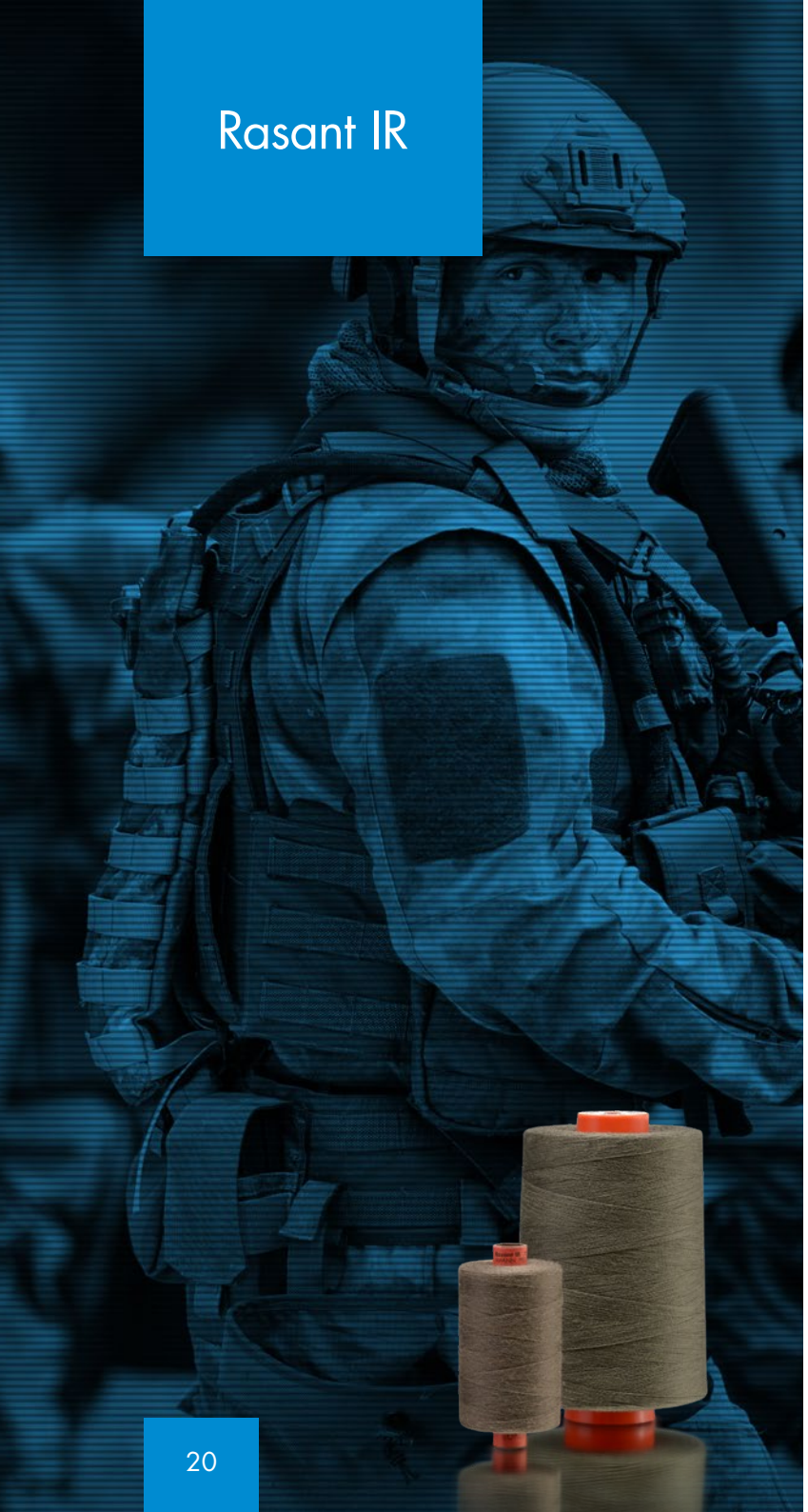
- NIR/IR compatibility
- High strength & load-bearing performance
- Low elongation
- Abrasion resistance
- Reliable performance under repeated mechanical stress
- Mechanical durability
- Colour consistency

Typical applications

- Combat uniforms
- Camouflage systems
- Load-carrying equipment
- Tactical vests & harnesses
- Lifting straps



Rasant IR



Product properties:

- Special sewing thread with an infrared-absorbent finish, for example for military and police clothing (Dual-use item: The delivery is subject to a granted export and transfer permit)

Raw material:

- Polyester/cotton

Construction type:

- Core spun, infrared-absorbent (IR)

Ticket no.	Tex no.	Needle size min (in Nm)	Needle size min (in No.)	Make-up
35	80	110	18	3,000 m Co
75	40	90	14	1,000 m (Box of 10 cops)

Co =

Main application:

- Protective Systems: tactical uniforms, plate carriers, protective covers
- Load-Carriage & Storage Systems: backpacks, tactical vests, equipment bags
- Field Shelter & Camouflage Systems: tents, protective covers, camouflage textile systems
- Identification: embroidered badges, rank insignia, name tapes

Certifications:

OEKO TEX®
STANDARD 100
94.0.8268
Hohenstein

Xtreme-tech with Dyneema®

Product properties:

- High-tenacity special sewing thread made from Dyneema®
- Maximum strength at minimum weight: 15 times stronger than steel
- High resistance to UV-light, chemicals and water
- Extremely abrasion-resistant
- Maximum strength can be reached in combination with fabric made from Dyneema®

Ticket no.	Tex no.	Needle size min (in Nm)	Needle size min (in No.)	Make-up
15	220	160	23	1,000 m FS
20	150	160	23	1,500 m FS
40	65	110	18	3,000 m FS

FS/KS =

Raw material:

- Dyneema®, HPPE (high performance polyethylene)

Construction type:

- Continuous filament, bonded

Main application:

- Load-Carriage & Storage Systems: backpacks, harnesses, equipment bags

Certifications:

OEKO TEX®
STANDARD 100
96.0.8810
Hohenstein

EXTREME WEATHER & UV PROTECTION

AMANN products for extreme weather & UV protection

- Outdoor Pro
- Serabond

EXTREME WEATHER & UV PROTECTION

Defense and protection applications used outdoors must withstand prolonged exposure to rain, moisture, sunlight and changing weather conditions. Specialized sewing threads help maintain seam performance and durability even when garments and equipment are exposed to demanding environmental influences.

Defense and protection applications used outdoors must withstand prolonged exposure to rain, moisture, sunlight and changing weather conditions. Specialized sewing threads help maintain seam performance and durability even when garments and equipment are exposed to demanding environmental influences. Weathering tests according to ISO 4892-1 and ISO 4892-2 evaluate the resistance of sewing threads to accelerated UV and weather exposure, while cold storage at -30°C assesses their suitability for use in extreme cold environments. Together, these tests provide important indications of long-term performance under demanding outdoor conditions.

Thread requirements

- High UV & weather resistance
- Moisture & water resistance
- Durable Colour fastness
- High seam durability
- Resistance to temperature fluctuations

Typical applications

- Combat & tactical gear
- Protective outerwear
- Load-carrying equipment
- Tents & shelters
- Sleeping & bivouac systems
- Protective covers
- Camouflage systems

OUTDOORPRO
AMANN

Product properties:

- The ideal sewing thread for workwear exposed to extreme weather conditions
- 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

Raw material:

- Polyester

Construction type:

- Continuous filament, bonded, water-repellent, PFAS-free

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	130	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 =

Main application:

- Protective Systems: protective covers, equipment covers, textile accessories
- Footwear & Personal Gear: combat boots, protective footwear, gaiters
- Field Shelter & Camouflage Systems: tents, tarpaulins, equipment covers

Certifications:

OEKO TEX®
STANDARD 100
93.0.4233
Hohenstein

Serabond

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

Raw material:

- Polyester

Construction type:

- Continuous filament, bonded

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	180	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 =

Main application:

- Protective Systems: protective covers, equipment covers, textile accessories
- Footwear & Personal Gear: combat boots, protective footwear, gaiters
- Field Shelter & Camouflage Systems: tents, tarpaulins, equipment covers

MAXIMUM ABRASION RESISTANCE

AMANN products for extreme weather & UV protection

- Onyx
- Strongbond
- Strongcore

MAXIMUM ABRASION RESISTANCE

Footwear, backpacks and other heavy-duty textiles used in defense and protection environments are subject to continuous abrasion and high mechanical stress. Particularly at highly stressed seam areas, sewing threads must withstand repeated friction and movement without compromising seam integrity. Highly abrasion-resistant sewing threads help ensure durable, reliable seams throughout intensive use and a long service life.

Thread requirements

- High tensile strength
- High seam strength
- Resistance to repeated friction and mechanical stress
- Reliable performance under repeated flexing and movement
- High resistance to surface damage
- Good dimensional stability
- Reliable sewability on heavy and dense materials
- Long-term durability

Typical applications

- Combat boots
- Tactical boots
- Protective footwear
- Backpacks and rucksacks
- Tactical bags
- Equipment bags
- Pouches
- Load-bearing equipment
- Webbing systems
- Harnesses
- Heavy-duty textile equipment
- Reinforced textile components

ONYX

Product properties:

- The ultra-strong sewing thread for stressed seams
- For closing and topstitch seams
- Robust, abrasion resistant, durable
- Excellent strength properties

Raw material:

- Polyamide 6.6

Construction type:

- Continuous filament

Ticket no.	Tex no.	Needle size min (in Nm)	Needle size min (in No.)	Make-up
10	270	200	25	1,500 m FS
13	210	180	24	1,500 m FS
20	135	140	22	2,000 m FS
30	105	130	21	2,500 m FS
40	70	110	18	2,000 m FS 4,000 m FS
60	45	90	14	6,000 m FS
80	35	80	12	8,000 m FS

FS/KS =

Main application:

- Load-Carriage & Storage Systems: backpacks, tactical vests, equipment bags
- Footwear & Personal Gear: combat boots, protective footwear, gloves

The right sewing thread for every mission:
For water-repellent seams: **Onyx WRe**

Certifications:

OEKO TEX®
STANDARD 100
96.0.8810
Hohenstein

Product properties:

- The robust, bonded sewing thread
- For seams with maximum durability
- Best sewing performance, also for multidirectional sewing

Raw material:

- Polyamide 6.6

Construction type:

- Continuous filament, bonded

Ticket no.	Tex no.	Needle size min (in Nm)	Needle size min (in No.)	Make-up
8	400	230	26	600 m FS
10	270	200	25	1,500 m FS
13	210	180	24	2,000 m FS
20	135	140	22	1,500 m FS
30	90	120	19	2,500 m FS
40	70	110	18	3,500 m FS
60	45	90	14	5,000 m FS
80	35	80	12	9,000 m FS

FS/KS =

Main application:

- Load-Carriage & Storage Systems: backpacks, tactical vests, equipment bags
- Footwear & Personal Gear: combat boots, protective footwear, gloves

Certifications:

OEKO TEX®
STANDARD 100
96.0.8810
Hohenstein

Strongcore
AMANN

Product properties:

- WRe = water-repellent and ecofriendly
- Free from harmful chemicals
- The robust, bonded sewing thread
- Brilliant colours, textile look & feel
- For seams with maximum durability
- Best sewing performance
- For multidirectional sewing

Raw material:

- Polyamide 6.6

Construction type:

- Continuous filament, bonded

Ticket no.	Tex no.	Needle size min (in Nm)	Needle size min (in No.)	Make-up
20	135	160	23	750 m FS 1,500 m FS 3,000 m FS
30	90	140	22	1,250 m FS 2,500 m FS
40	70	120	19	1,750 m FS 3,500 m FS
60	45	100	16	2,250 m FS 4,500 m FS

FS/KS =

Main application:

- Load-Carriage & Storage Systems: backpacks, tactical vests, equipment bags
- Footwear & Personal Gear: combat boots, protective footwear, gloves

Certifications:

OEKO TEX®
STANDARD 100
96.0.8810
Hohenstein

The right sewing thread for every mission:
For water-repellent seams: **Strongcore WRe**

STANDARD APPLICATIONS

AMANN products for standard applications:

- Saba
- Serafil
- Sabatex
- Rasant

STANDARD APPLICATIONS

Standard applications require reliable and durable seams without the need for dedicated protective or functional thread technology. In service, dress and parade uniforms, the focus is on consistent sewing performance, long-term durability and a high-quality appearance throughout the garment's service life. Since these garments are often exposed to repeated washing, drying and professional maintenance, care performance is also a key requirement. The PRO care label provides additional assurance by confirming that selected AMANN sewing threads have been tested according to DIN EN ISO 15797 and certified according to DIN EN ISO 30023 for industrial laundering, drying, colour fastness and seam strength. This is particularly relevant for standard uniforms and service clothing, where seams must remain durable, colour-stable and visually clean even after repeated care cycles.

Thread requirements

- Reliable sewability
- High seam strength
- Abrasion resistance
- Colour fastness
- Wash & care resistance
- Clean seam appearance
- Long-term durability
- Multi-material compatibility
- Precision embroidery
- Long-term durability

Typical applications

- Service & dress uniforms
- Parade & ceremonial uniforms
- Police uniforms
- Shirts, trousers & jackets
- Coveralls & base layers
- Headwear & footwear
- Textile & leather accessories
- Flags
- Identification & insignia embroidery
- Badges & emblems

saba

Product properties:

- AMANN's all-rounder for workwear and leasingwear
- High-performing, outstanding sewing behaviour
- Ideal abrasion resistance and strength properties
- Great in tickets and colours
- Textile appearance
- For closing and topstitch seams
- For matt embroidery
- Excellent colour fastness

Ticket no.	Tex no.	Needle size min (in Nm)	Needle size min (in No.)	Make-up
8	400	200	25	800 m Co
12	260	150	23	1,100 m Co
18	200	140	22	1,400 m Co
30	105	110	18	10x300 m XW 3,000 m Co
35	80	100	16	5,000 m Co
50	60	90	14	10x500 m XW 2,500 m Co
80	40	80	12	10x1,000 m XW 5,000 m Co
100	30	75	11	10x1,000 m XW 5,000 m Co
120	24	65	9	10x1,000 m XW 5,000 m Co
150	21	55	7	10x1,000 m XW 5,000 m Co
180	18	50	6	5,000 m Co

Co = XW =

Raw material:

- Polyester/polyester

Construction type:

- Core spun

Applications:

- Uniforms & apparel: Combat uniforms, tactical uniforms, field jackets
- Identification: patches, badge, flags

Certifications:

OEKO TEX® STANDARD 100 93.0.4233 Hohenstein

PRO

The right sewing thread for every mission:
For water-repellent seams: **Saba WRe**
For recycled seams: **Saba Recycled**

Serafil

Product properties:

- The outstanding product for shoes and accessories
- For closing and decorative seams
- Subtle sheen
- Special finishing process
- High seam strength
- Best sewing performance with perfect stitch formation
- Suitable for coarse decorative embroidery

Ticket no.	Tex no.	Needle size min (in Nm)	Needle size min (in No.)	Make-up
7	450	220	26	kg
8	350	200	25	850 m FS
10	270	180	24	300 m FS 1,000 m FS
15	210	150	23	450 m FS 1,500 m FS
20	135	120	19	600 m FS 2,500 m FS
30	90	100	16	900 m FS 4,000 m FS
40	70	90	14	1,200 m FS 5,000 m FS
60	45	80	12	1,800 m FS 5,000 m FS
80	30	70	10	2,400 m FS 10,000 m FS

FS/KS =

Raw material:

- Polyester

Construction type:

- Continuous filament

Main application:

- Uniforms & apparel: field jackets, trousers, rainwear
- Load-Carriage & Storage Systems: backpacks, tactical vests, equipment bags
- Footwear & Personal Gear: combat boots, protective footwear, gloves
- Field Shelter & Camouflage Systems: tents, tarpaulins, equipment covers
- Identification: patches, badge, flags

Certifications:

OEKO TEX® STANDARD 100 93.0.4233 Hohenstein

PRO

The right sewing thread for every mission:
For water-repellent seams: **Serafil WRe**
For recycled seams: **Serafil Recycled.**

Product properties:

- The perfect bulk yarn
- Soft, voluminous, skin-friendly
- For all serging and coverstitch seams
- For optimal edge covering
- Sabatex 60 is perfectly suited for chenille embroidery

Raw material:

- Polyester

Construction type:

- Continuous filament, texturised

Ticket no.	Tex no.	Needle size min (in Nm)	Needle size min (in No.)	Make-up
60	58	100	16	6,000 m Co 18,000 m FS
100	35	90	14	5,000 m Co 10,000 m FS
120	18	80	12	10,000 m Co 30,000 m Co
250	11	70	10	5,000 m Co 10,000 m Co 30,000 m Co

Co = FS/KS =

Main application:

- Uniforms & apparel: shirts, base layers, headwear

Certifications:

OEKO TEX® STANDARD 100 93.0.4233 Hohenstein

PRO

The right sewing thread for every mission:
For recycled seams: **Sabatex Recycled**

Product properties:

- The traditional core spun thread
- Robust in sewing
- Approved in many applications
- For closing and topstitch seams
- For matt embroidery

Raw material:

- Polyester/cotton

Construction type:

- Core Spun

Ticket no.	Tex no.	Needle size min (in Nm)	Needle size min (in No.)	Make-up
35	80	110	18	3,000 m Co
50	60	100	16	10x1,000 m XW 5,000 m Co
75	40	90	14	10x1,000 m XW 5,000 m Co 10,000 m Co
120	24	70	10	10x1,000 m XW 5,000 m Co 10,000 m Co

Co = XW =

Main application:

- Uniforms & apparel: field jackets, trousers, rainwear
- Protective Systems: protective covers, equipment covers, textile accessories
- Field Shelter & Camouflage Systems: tents, tarpaulins, equipment covers

Certifications:

OEKO TEX®
STANDARD 100
94.0.8268
Hohenstein

ISACORD RECYCLED

Product properties:

- AMANN's sustainable embroidery thread made from 100% recycled polyester
- The universal machine embroidery thread for all brilliant and fashionable embroidery
- Available as GRS certified
- Abrasion-resistant, robust, perfect embroidery properties
- Excellent colour fastness
- The ideal choice for manufacturing sustainable products

Raw material:

- 100% recycled polyester

Construction type:

- Continuous filament, trilobal

Ticket no.	Tex no.	Needle size min (in Nm)	Needle size min (in No.)	Make-up	No. of colours
40	27	65	9	10 x 1,000m KS 5,000 m KS	390 391

FS/KS =

Main application:

- Identification: embroidered badges, rank insignia, name tapes

The right embroidery thread for every mission:
For high UV exposure: **Isacord Recycled UV**
For metallic embroidery: **Isamet**

Certifications:

OEKO TEX® STANDARD 100 22.0.00204 Hohenstein

PRO

APPLICATION MATRIX

	1. Uniforms & Apparel	2. Protective Systems	3. Load-Carriage & Storage Systems	4. Footwear & Personal Gear	5. Field Shelter & Camouflage Systems	6. Identification
AMANN articles						
A-tech	X	X				
A-tech CS	X	X				X
Ac-tech	X	X	X	X		
N-tech	X	X				
N-tech CS	X	X				X
Nc-tech	X	X	X	X		
K-tech		X	X			
Kc-tech		X	X	X		
Rasant IR		X	X		X	X
Xtreme-tech			X			
Outdoor-Pro		X			X	
Serabond		X			X	
Onyx			X	X		
Strongbond			X	X		
Strongcore			X	X		
Saba	X					
Serafil	X		X	X	X	X
Sabatex	X					
Rasant	X	X			X	
Isacord Recycled						X

AMANN TECHNICAL ADVISORY SERVICES (TAS)

As strong and reliable as our threads: expertise you can count on

Great sewing and embroidery results depend on more than the right thread. They come from understanding materials, machines, processes and the many details that make the difference in production.

That is where our Technical Advisory Services (TAS) come in. Sewing and embroidery technology has been one of AMANN's core competencies for decades – and we continue to deepen this expertise through extensive testing, analysis and practical experience.

At our state-of-the-art technology centres, we put our products through their paces and examine their performance down to the smallest fibre. This helps us ensure the quality you expect from AMANN while continuously expanding our knowledge of materials, applications and processing technologies.

But knowledge becomes truly valuable when it helps you solve a challenge. That is why our TAS experts work closely with customers on real production questions – from selecting the right sewing thread and optimising processing parameters to improving productivity and calculating material requirements.

We are also happy to share our expertise directly with your teams through individual customer workshops, technical seminars and specialist lectures. And when a challenge requires a closer look, you can rely on us for specialised support, from sewing technology development to processing tests.

Whether you are working with established materials or exploring something new, our experts are there to support you with practical, application-oriented advice.

And because your challenges do not stop at borders, neither does our support: AMANN experts are at your side worldwide.

If you have any questions about these topics, please contact your local sales representative or email **tas@amann.com**

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