Techs® Fabrics for Firefighter Garments

ARAMIDBLENDS

Textil Santanderina is a leading European textile group, with multiple production plants in Spain and fully vertically integrated spinning, weaving, dyeing, printing and finishing operations.

We operate completely traceable production and quality systems, certified to ISO 9001 and ISO 14001.

We manufacture a wide array of fabrics for different market segments, with quality and sustainability as our key drivers.

Techs, Textil Santanderina's department for technical fabrics in the work- and safetywear market, has a long experience in the development of high-end, inherently FR fabrics that are applied in multiple markets worldwide.

Constant development in close partnership with clients, end-users and fibre manufacturers gives us the possibility to introduce innovations that keep workers safe for example in the oil & gas industry, utility companies, foundries, firefighting, military and police.

Techs®
ADVANCED FABRICS BY TEXTIL SANTANDERINA

SANTANDERINA®
GROUP

Techs Fabrics for Firefighter Garments

Protective garments for structural firefighting, wildland fire fighting, and rescue services are designed with optimum performance and comfort under strenuous circumstances in mind.

Our fabrics are engineered to make sure such garments provide optimal safety, durability, and comfort, ensuring structural firefighters, wildland professionals, and rescue teams receive the highest level of protection when they need it most.

OUTER SHELLS

Structural firefighting suits usually consist of three layers: the outer shell, the moisture barrier, and the thermal barrier.

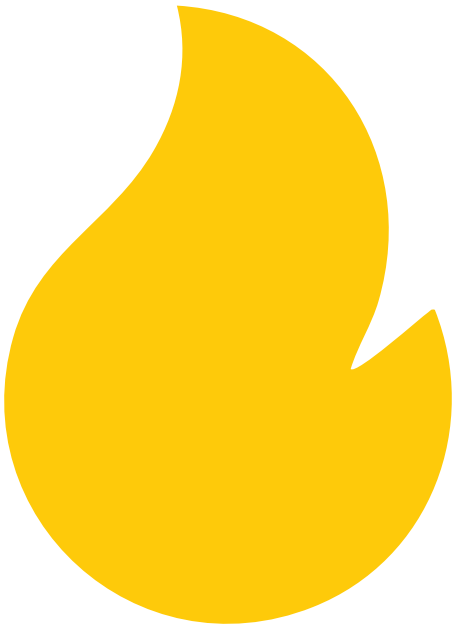
The outer shell serves as the first line of defence, shielding the wearer while ensuring the integrity and functionality of the inner layers.

This critical fabric must be exceptionally strong and durable, resistant to extreme conditions, and incapable of melting or igniting even in the most hazardous environments.

At Techs, we leverage our expertise in developing inherently flame-resistant (FR) fabrics, collaborating closely with clients and end-users to create high performance outer shell materials, that are obviously certified to international standards.

Techs®

ADVANCED FABRICS BY TEXTIL SANTANDERINA



Techsforce

Composition: Technora 53%
Conex 45% | Antistatic Fiber 2%
Finish: FC

Ref: 8485

Techsforce is a classic outer shell in twill construction. The blend with a majority of para-aramid combined with a weight of 240 g/m2 makes for a very sturdy and robust outer shell with great mechanical properties. Not only is it used as an outer shell fabric for intervention suits, it is also applied as reinforcement for the knee-area in other types of firefighting garments such as those used in rescue operations or wild land firefighting; proof enough that it can take some heavy use. Techsforce is available in Navy and Black and is a guaranteed value for money choice!

Color Range

4558
Blue Steel

9345
Charcoal

Techs®
ADVANCED FABRICS BY TEXTIL SANTANDERINA

MECHANICAL CHARACTERISTICS	METHOD	VALUE
Tensile strength in Warp (N)	UNE-EN ISO 13934-1	3400
Tensile strength in Weft (N)	UNE-EN ISO 13934-1	2700
Residual Tensile strength in Warp (N)	UNE-EN ISO 13934-1	3400
Residual Tensile strength in Weft (N)	UNE-EN ISO 13934-1	2500
Tear strength in Warp (N)	UNE-EN ISO 13937-2	420
Tear strength in Weft (N)	UNE-EN ISO 13937-2	290
Abrasion (cycles)	UNE-EN ISO 12947-2	>50.000 @ 12 kPa

OTHER PARAMETERS	METHOD		VALUE
Warp shrinkage (%)	ISO 15797	5 X 75 ºC	< -3
Weft shrinkage (%)	ISO 15797	5 X 75 ºC	< -3
Heat resistance	ISO 17493		PASS
Resistance to surface wetting	EN 24920		5
Resistance to penetration by liquid	EN ISO 6530		>80%
Light fastness	ISO 105-B01		>5

CERTIFICATION	EN469 | EN1149-5

Techsforce Gold

Composition: Para-Aramid 50%
Meta-Aramid 48% | Antistatic Fiber 2%
Finish: FC C6

Ref: 8556

Techsforce Gold is also based upon a blend in which the para-aramid fibre prevails. In this case though, we have added para-aramid filament yarn in the weft thereby increasing mechanical strength another notch, while being able to bring the weight down to a comfortable 220 g/m2. The special broken twill construction not only gives the fabric a very nice look and feel with the filament yarn shimmering through, it also ensures outstanding performance when exposed to heat- and flame, showing no signs of heat fatigue. With our special repellent finish the Techsforce Gold makes sure that fire fighters are well protected from spills of liquid chemicals. Techsforce Gold is available in colours Gold and Black.

Color Range

76965
Gold

9345
Black Gold

Techs®
ADVANCED FABRICS BY TEXTIL SANTANDERINA

MECHANICAL CHARACTERISTICS	METHOD	VALUE
Tensile strength in Warp (N)	UNE-EN ISO 13934-1	3500
Tensile strength in Weft (N)	UNE-EN ISO 13934-1	3000
Residual Tensile strength in Warp (N)	UNE-EN ISO 13934-1	3400
Residual Tensile strength in Weft (N)	UNE-EN ISO 13934-1	2700
Tear strength in Warp (N)	UNE-EN ISO 13937-2	340
Tear strength in Weft (N)	UNE-EN ISO 13937-2	180
Abrasion (cycles)	UNE-EN ISO 12947-2	>50.000 @ 12 kPa

OTHER PARAMETERS	METHOD		VALUE
Warp shrinkage (%)	ISO 15797	5 X 75 ºC	< -3
Weft shrinkage (%)	ISO 15797	5 X 75 ºC	< -3
Heat resistance	ISO 17493		PASS
Resistance to surface wetting	EN 24920		5
Resistance to penetration by liquid	EN ISO 6530		>80%
Light fastness	ISO 105-B01		>5

CERTIFICATION	EN469 | EN1149-5

Techs Outer Shells

ARAMIDBLENDS

Panther

Composition: Meta-Aramid 65%
Para-Aramid 33% | Antistatic Fiber 2%
Finish: FC C6

Ref: 15003

Panther is a recently developed 215 g/m2 outer shell fabric that offers guaranteed protection and good mechanical properties at a very affordable price-point. With its micro-ripstop in a blend of meta-aramid with a grid of para-aramid, it is a very flexible and breathable fabric whilst offering optimum protection. It is available in four standard colour ways and can be made to order in a variety of others. The fabric is made in producer-dyed fibers, so colour fastness both to light and to laundering is very high.

Color Range

76965
Gold

33476
Red Carbon

45346
Dark Navy

9345
Charcoal

MECHANICAL CHARACTERISTICS	METHOD	VALUE
Tensile strength in Warp (N)	UNE-EN ISO 13934-1	1900
Tensile strength in Weft (N)	UNE-EN ISO 13934-1	1800
Residual Tensile strength in Warp (N)	UNE-EN ISO 13934-1	1700
Residual Tensile strength in Weft (N)	UNE-EN ISO 13934-1	1600
Tear strength in Warp (N)	UNE-EN ISO 13937-2	580
Tear strength in Weft (N)	UNE-EN ISO 13937-2	600
Abrasion (cycles)	UNE-EN ISO 12947-2	>50.000 @ 12 kPa

OTHER PARAMETERS	METHOD		VALUE
Warp shrinkage (%)	ISO 15797	5 X 75 ºC	< -3
Weft shrinkage (%)	ISO 15797	5 X 75 ºC	< -3
Heat resistance	ISO 17493		PASS
Resistance to surface wetting	EN 24920		4
Resistance to penetration by liquid	EN ISO 6530		>80%
Light fastness	ISO 105-B01		>5

CERTIFICATION	EN469 | EN1149-5

Techs Outer Shells
ARAMIDBLENDS

Jackal

Composition: Meta-Aramid 55% | Viscose FR 38% | Para-Aramid 5% | Antistatic Fiber 2%
Finish: FC C6

Ref: 8627

Jackal fabric is one of the most versatile and multiapplication fabrics in Tech's range. It is a 220 g/m2 ripstop material, that is not only certified to EN469 for use in intervention suits as outer shell, it is at the same time suitable and certified for wildland fire fighting garments, or rescue garments. Besides aramid fibre for mechanical strength, Jackal incorporates a proportion of Lenzing FR fibre which gives it a very comfortable touch and great moisture management characteristics. There is a broad colour variety available and the use of producer-dyed aramids ensures excellent colour performance.

Color Range

77114
Gold

31454
Red

43109
Navy Blue

83762
Mindnight

Techs®
ADVANCED FABRICS BY TEXTIL SANTANDERINA

MECHANICAL CHARACTERISTICS	METHOD	VALUE
Tensile strength in Warp (N)	UNE-EN ISO 13934-1	1000
Tensile strength in Weft (N)	UNE-EN ISO 13934-1	700
Residual Tensile strength in Warp (N)	UNE-EN ISO 13934-1	920
Residual Tensile strength in Weft (N)	UNE-EN ISO 13934-1	650
Tear strength in Warp (N)	UNE-EN ISO 13937-2	72
Tear strength in Weft (N)	UNE-EN ISO 13937-2	58
Abrasion (cycles)	UNE-EN ISO 12947-2	>50.000 @ 12 kPa

OTHER PARAMETERS	METHOD		VALUE
Warp shrinkage (%)	ISO 15797	5 X 75 ºC	< -3
Weft shrinkage (%)	ISO 15797	5 X 75 ºC	< -3
Heat resistance	ISO 17493		PASS
Resistance to surface wetting	EN 24920		5
Resistance to penetration by liquid	EN ISO 6530		>80%
Light fastness	ISO 105-B01		>5

CERTIFICATION	EN469 | EN1149-5 | EN15384 | EN16689

WILDLAND FIREFIGHTING AND RESCUE SERVICES

Fighting wildland fires is a job to be done under extreme circumstances, and frequently in difficult terrain. Often the outside temperatures are already very high, only to be increased by the raging flames.

Therefore, the fabric that is used in wildland firefighting garments, must be tough, resistant and durable on the one hand, but light, comfortable and breathable on the other. At Techs we have developed a number of fabrics for this application, that do just that; combine fibres and weave-patterns in such a way that the resulting material is breathable, capable of moisture management, and light while at the same time offering excellent mechanical characteristics. Most of those fabrics are at the same time perfectly suitable for rescue services and are certified to the EN15384 wildland standard as well as the EN16689 rescue standard. NFPA certification is pending.

Techs®
ADVANCED FABRICS BY TEXTIL SANTANDERINA

Jaguar 220 ST

Composition: Meta-Aramid 91% | Para-Aramid 5% | Antistatic Fiber 2% | Elastane 2%
Finish: FC

Ref: 8954

Our Jaguar 220 ST fabric is a traditional aramid fabric, with a modern touch, in the form of the addition of stretch-fiber. This increases comfort and freedom of movement, whilst the well-known performance of an all-aramid fabric remains intact. Now you can count on the performance of a real classic, and at the same time perform your tasks without feeling restrained by your garment.

Color Range

33476
Red

45346
Dark Navy

79230
Sand

Techs®
ADVANCED FABRICS BY TEXTIL SANTANDERINA

MECHANICAL CHARACTERISTICS	METHOD	VALUE
Tensile strength in Warp (N)	UNE-EN ISO 13934-1	1100
Tensile strength in Weft (N)	UNE-EN ISO 13934-1	800
Tear strength in Warp (N)	UNE-EN ISO 13937-2	40
Tear strength in Weft (N)	UNE-EN ISO 13937-2	40
Abrasion (cycles)	UNE-EN ISO 12947-2	>60.000 @ 12 kPa

OTHER PARAMETERS	METHOD		VALUE
Warp shrinkage (%)	ISO 15797	5 X 75 ºC	< -3
Weft shrinkage (%)	ISO 15797	5 X 75 ºC	< -3
Heat resistance	ISO 17493		PASS
Resistance to surface wetting	EN 24920		5
Resistance to penetration by liquid	EN ISO 6530		
Light fastness	ISO 105-B01		>5

CERTIFICATION	EN 15384 | EN1149-5

Wildland Firefighting and Rescue Services

ARAMIDBLENDS

Kerlast 230 ST

Composition: Aramid 67% | Lenzing FR 29%
Antistatic Fiber 2% | Elastane 2%

Ref: 15720

Our Kerlast 230 ST fabric hits the sweet spot between aramid fibre-content for good mechanical performance, Lenzing FR for a nice touch, breathability, and moisture management plus the freedom of movement offered by the incorporated stretch. At a weight of 230 g/m2 it is sturdy enough to withstand intense use under demanding circumstances, while at the same time offering stretch and breathability. It enables the wearer to comfortably perform the challenging tasks at hand.

Color Range

4557
Navy

77114
Sand

Techs®
ADVANCED FABRICS BY TEXTIL SANTANDERINA

MECHANICAL CHARACTERISTICS	METHOD	VALUE
Tensile strength in Warp (N)	UNE-EN ISO 13934-1	850
Tensile strength in Weft (N)	UNE-EN ISO 13934-1	650
Tear strength in Warp (N)	UNE-EN ISO 13937-2	70
Tear strength in Weft (N)	UNE-EN ISO 13937-2	70
Abrasion (cycles)	UNE-EN ISO 12947-2	>50.000 @ 12 kPa

OTHER PARAMETERS	METHOD		VALUE
Warp shrinkage (%)	ISO 15797	5 X 75 ºC	< -3
Weft shrinkage (%)	ISO 15797	5 X 75 ºC	< -3
Heat resistance	ISO 17493		PASS
Resistance to surface wetting	EN 24920		5
Resistance to penetration by liquid	EN ISO 6530		
Light fastness	ISO 105-B01		>5

CERTIFICATION	EN 15384 | EN16689 | EN1149-5

Wildland Firefighting and Rescue Services

ARAMIDBLENDS

Vulkan

Composition: Lenzing FR 64% | Meta-Aramid 30% | Para-Aramid 5% | Antistatic Fiber 1%
Finish: FC

Ref: 8937

Our Vulkan fabric was originally developed for the wildland firefighting market in Australia but has meanwhile become a well-accepted fabric for this application in many regions across the world. It has a high percentage of Lenzing FR fibre for increased comfort and moisture management capabilities, and enough aramid to make sure it is well up to the task mechanically. Additionally, it can be made available in HiVis Yellow, making it suitable for the segment of rescue services. A well-balanced all-round solution.

Color Range

10045
Yellow

63066
Olive

31454
Red

83904
Night Blue

60505
HV Yellow

Techs®
ADVANCED FABRICS BY TEXTIL SANTANDERINA

MECHANICAL CHARACTERISTICS	METHOD	VALUE
Tensile strength in Warp (N)	UNE-EN ISO 13934-1	800
Tensile strength in Weft (N)	UNE-EN ISO 13934-1	650
Tear strength in Warp (N)	UNE-EN ISO 13937-2	35
Tear strength in Weft (N)	UNE-EN ISO 13937-2	40
Abrasion (cycles)	UNE-EN ISO 12947-2	>50.000 @ 12 kPa

OTHER PARAMETERS	METHOD		VALUE
Warp shrinkage (%)	ISO 15797	5 X 75 ºC	< -3
Weft shrinkage (%)	ISO 15797	5 X 75 ºC	< -3
Heat resistance	ISO 17493		PASS
Resistance to surface wetting	EN 24920		5
Resistance to penetration by liquid	EN ISO 6530		>80%
Light fastness	ISO 105-B01		>5

CERTIFICATION	EN15384 | EN16689 | EN20471 | EN1149-5

Wildland Firefighting and Rescue Services

ARAMIDBLENDS

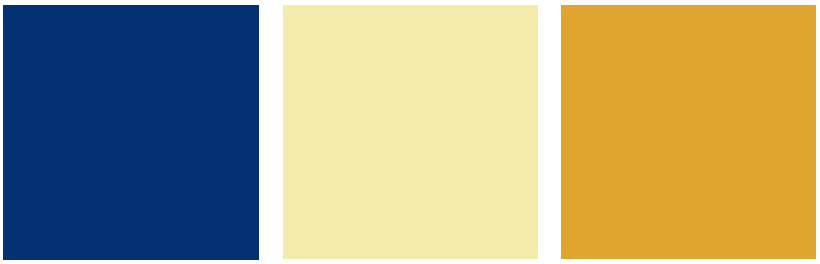
Firewool

Composition: Aramid 45% | Lenzing FR 35%
Wool 10% | Polyamide 9% | Antistatic Fiber 1%

Ref: 15041

The Firewool fabric was born as an evolution of our Jackal fabric, one of our most-sold fabrics for wildland firefighting of all times. As the name implies, wool fibre has been added to the composition, and wool is a natural fibre that in itself is flame-retardant, as well as bio-degradable, renewable, and naturally breathable. In combination with aramid, polyamide and Lenzing FR, this creates the perfect blend for permanent protection, as well as enhanced comfort, wearability and strength. The ideal fabric for a wildland fire fighters' garment.

Color Range



4557
Navy

10045
Amarillo

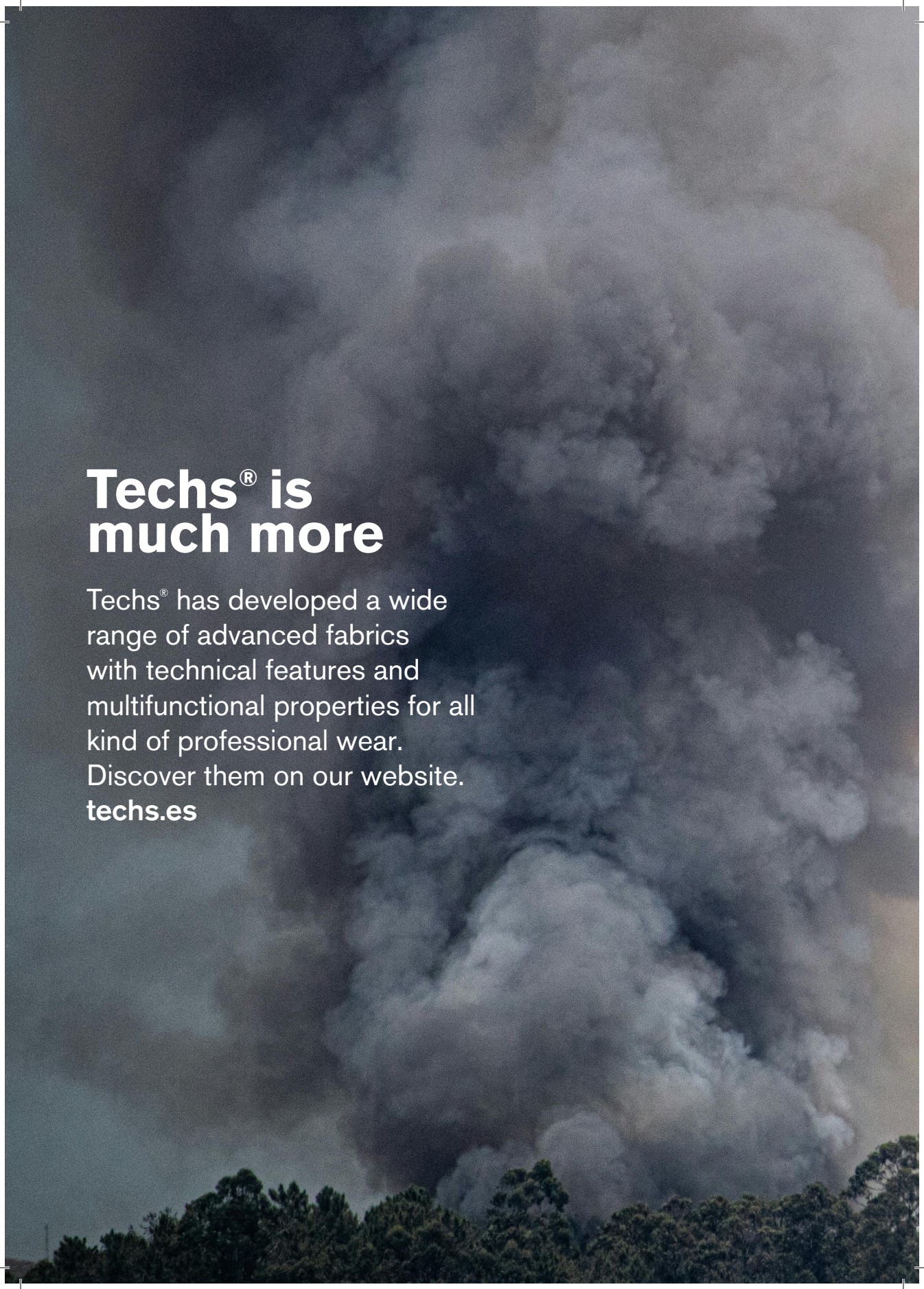
20772
Naranja

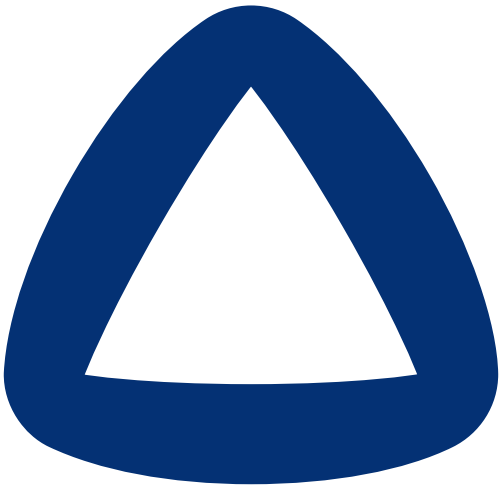
Techs®
ADVANCED FABRICS BY TEXTIL SANTANDERINA

MECHANICAL CHARACTERISTICS	METHOD	VALUE
Tensile strength in Warp (N)	UNE-EN ISO 13934-1	800
Tensile strength in Weft (N)	UNE-EN ISO 13934-1	650
Tear strength in Warp (N)	UNE-EN ISO 13937-2	50
Tear strength in Weft (N)	UNE-EN ISO 13937-2	45
Abrasion (cycles)	UNE-EN ISO 12947-2	>50.000 @ 12 kPa

OTHER PARAMETERS	METHOD		VALUE
Warp shrinkage (%)	ISO 15797	5 X 75 ºC	< -3
Weft shrinkage (%)	ISO 15797	5 X 75 ºC	< -3
Heat resistance	ISO 17493		PASS
Resistance to surface wetting	EN 24920		5
Resistance to penetration by liquid	EN ISO 6530		>80%
Light fastness	ISO 105-B01		>5

CERTIFICATION	EN15394 |EN16689 | EN1149-5


Techs® is
much more
Techs® has developed a wide range of advanced fabrics with technical features and multifunctional properties for all kind of professional wear. Discover them on our website.
techs.es



Techs®
ADVANCED FABRICS BY TEXTIL SANTANDERINA

SANTANDERINA®
GROUP

techs.es
santanderinagroup.com
marketing@techs.es

10|03|2025