

Techs[®] Fabrics for Firefighter Garments



ARAMIDBLEND[®] 



Santanderina Group 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 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.



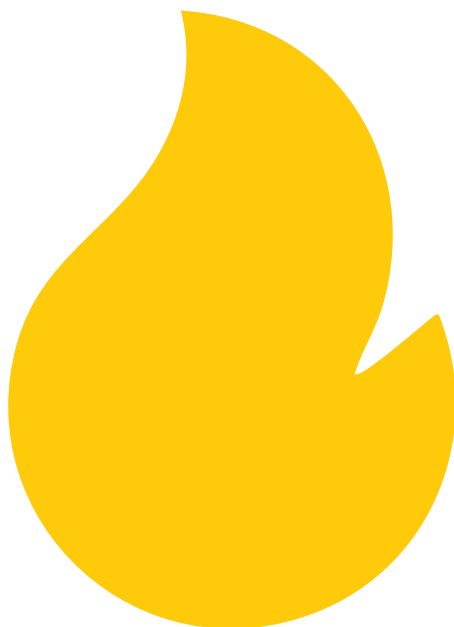
STRUCTURAL

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.



Techsforce

Composition: Technora | Conex

Antistatic Fiber

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
Navy



9345
Charcoal

MECHANICAL CHARACTERISTICS	METHOD	VALUE
Tensile strength in Warp (N)	UNE-EN ISO 13934-1	3000
Tensile strength in Weft (N)	UNE-EN ISO 13934-1	2400
Tear strength in Warp (N)	UNE-EN ISO 13937-2	350
Tear strength in Weft (N)	UNE-EN ISO 13937-2	250
Abrasion (cycles)	UNE-EN ISO 12947-2	>70.000 @ 12 kPa

OTHER PARAMETERS	METHOD	VALUE
Warp shrinkage (%)	ISO 15797 5 X 75 °C	< -3
Weft shrinkage (%)	ISO 15797 5 X 75 °C	< -3

Techsforce Gold

Composition: Para-Aramid | Meta-Aramid
Antistatic Fiber
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

MECHANICAL CHARACTERISTICS	METHOD	VALUE
Tensile strength in Warp (N)	UNE-EN ISO 13934-1	3100
Tensile strength in Weft (N)	UNE-EN ISO 13934-1	2500
Tear strength in Warp (N)	UNE-EN ISO 13937-2	180
Tear strength in Weft (N)	UNE-EN ISO 13937-2	120
Abrasion (cycles)	UNE-EN ISO 12947-2	>50.000 @ 12 kPa

OTHER PARAMETERS	METHOD	VALUE
Warp shrinkage (%)	ISO 15797 5 X 75 °C	< -3
Weft shrinkage (%)	ISO 15797 5 X 75 °C	< -3

Panther

Composition: Meta-Aramid
Para-Aramid | Antistatic Fiber
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	1500
Tensile strength in Weft (N)	UNE-EN ISO 13934-1	1200
Tear strength in Warp (N)	UNE-EN ISO 13937-2	450
Tear strength in Weft (N)	UNE-EN ISO 13937-2	500
Abrasion (cycles)	UNE-EN ISO 12947-2	>50.000 @ 12 kPa

OTHER PARAMETERS	METHOD	VALUE
Warp shrinkage (%)	ISO 15797 5 X 75 °C	< -3
Weft shrinkage (%)	ISO 15797 5 X 75 °C	< -3

Jackal

Composition: Meta-Aramid | Viscose FR
Para-Aramid | Antistatic Fiber
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



10045
Yellow



63066
Green



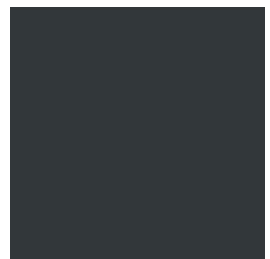
77114
Gold



31454
Red



43109
Navy Blue



83762
Mindnight

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	45
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 °C	< -3
Weft shrinkage (%)	ISO 15797 5 X 75 °C	< -3

CERTIFICATION

EN469 | EN1149-5 | EN ISO 15384 | EN 16689
 EN ISO 11612 | EN ISO 11611 | EN 13034 | EN IEC 61482-1-1
 EN 61482-1-2

Panther Compound 540

Composition:

Meta-Aramid | Para-Aramid | Antistatic Fiber

Aramid nonwoven laminated to an ePTFE bicomponent membrane

Aramid | Viscose FR

Ref: 15003 - PANTHER

320000 - MOISTURE BARRIER 125

308975 - THERMAL BARRIER 205

PANTHER Compound 540 is a high-performance protective compound developed for structural firefighting garments. With a total weight of 540 g/m², it combines an aramid outer fabric with a moisture barrier and thermal barrier, providing reliable protection, durability and comfort in extreme conditions.

Color Range



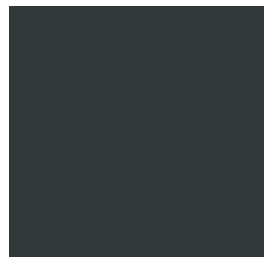
76965
Gold



33476
Red Carbon



45346
Dark Navy



9345
Charcoal

MECHANICAL CHARACTERISTICS	METHOD	VALUE
Tensile strength in Warp (N)	UNE-EN ISO 13934-1	1500
Tensile strength in Weft (N)	UNE-EN ISO 13934-1	1200
Dimensional stability in Warp	UNE-EN ISO 5077	≤ -3%
Dimensional stability in Weft	UNE-EN ISO 5077	≤ -3%
Tear strength in Warp (N)	UNE-EN ISO 13937-2	450
Tear strength in Weft (N)	UNE-EN ISO 13937-2	500

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.



Jaguar 220 ST

Composition: Meta-Aramid | Para-Aramid
Antistatic Fiber | Elastane
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.

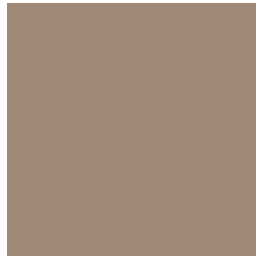
Color Range



33476
Red



45346
Dark Navy



79230
Sand



83941
Grey



45777
Royal



4393
Anthracite

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	>50.000 @ 12 kPa

OTHER PARAMETERS	METHOD	VALUE
Warp shrinkage (%)	ISO 15797 5 X 75 °C	< -3
Weft shrinkage (%)	ISO 15797 5 X 75 °C	< -3

CERTIFICATION

EN ISO 15384 | EN1149-5 | EN ISO 11612 | EN 13034
EN 16689

Kerlast 230

Composition: Aramid | Viscose FR
Antistatic Fiber | Elastane

Ref: 8720

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

MECHANICAL CHARACTERISTICS	METHOD	VALUE
Tensile strength in Warp (N)	UNE-EN ISO 13934-1	750
Tensile strength in Weft (N)	UNE-EN ISO 13934-1	720
Tear strength in Warp (N)	UNE-EN ISO 13937-2	65
Tear strength in Weft (N)	UNE-EN ISO 13937-2	60
Abrasion (cycles)	UNE-EN ISO 12947-2	>50.000 @ 12 kPa

OTHER PARAMETERS	METHOD	VALUE
Warp shrinkage (%)	ISO 15797 5 X 75 °C	< -3
Weft shrinkage (%)	ISO 15797 5 X 75 °C	< -3

Wildland Firefighting and Rescue Services

ARAMIDBLEND[△]

Vulkan

Composition: Viscose FR | Meta-Aramid
Para-Aramid | Antistatic Fiber
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



10352
Lemon



20477
Orange



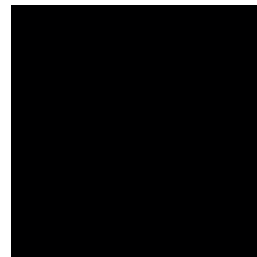
63066
Green



77114
Sand



31454
Red



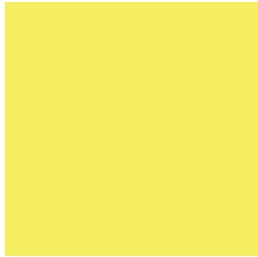
90205
Black



43109
Navy



83904
Grey



60505
Yellow HV

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		35
Abrasion (cycles)	UNE-EN ISO 12947-2		>50.000 @ 12 kPa

OTHER PARAMETERS	METHOD		VALUE
Warp shrinkage (%)	ISO 15797	5 X 75 °C	< -3
Weft shrinkage (%)	ISO 15797	5 X 75 °C	< -3

CERTIFICATION

EN ISO 15384 | EN16689 | EN ISO 20471 | EN1149-5 EN
ISO 11612 | EN ISO 11611 | EN 13034 | EN IEC 61482-1-1
ASTM F1506 | NFPA 2112

Firewool

Composition: Aramid | Viscose FR
Wool | Polyamide | Antistatic Fiber

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
Yellow



20772
Orange

MECHANICAL CHARACTERISTICS	METHOD	VALUE
Tensile strength in Warp (N)	UNE-EN ISO 13934-1	750
Tensile strength in Weft (N)	UNE-EN ISO 13934-1	650
Tear strength in Warp (N)	UNE-EN ISO 13937-2	55
Tear strength in Weft (N)	UNE-EN ISO 13937-2	50
Abrasion (cycles)	UNE-EN ISO 12947-2	>50.000 @ 12 kPa

OTHER PARAMETERS	METHOD	VALUE
Warp shrinkage (%)	ISO 15797 5 X 75 °C	< -3
Weft shrinkage (%)	ISO 15797 5 X 75 °C	< -3

TechsAlexandra 220HT

Composition: Viscose FR | Aramid
Polyamide | Antistatic Fiber
Finish: FC C6

Ref: 15020

TechsAlexandra 220 HT fabric is a lightweight (220 g/m²) protective fabric that combines high thermal performance with excellent comfort. Its FR viscose and aramid blend provides durability, breathability and reliable protection for firefighting and emergency garments.

Color Range



10045
Yellow



63066
Green



33547
Red



83904
Grey

MECHANICAL CHARACTERISTICS	METHOD	VALUE
Tensile strength in Warp (N)	UNE-EN ISO 13934-1	1400
Tensile strength in Weft (N)	UNE-EN ISO 13934-1	1300
Pilling	UNE-EN ISO 12945-2	4
Tear strength in Warp (N)	UNE-EN ISO 13937-2	300
Tear strength in Weft (N)	UNE-EN ISO 13937-2	250
Abrasion (cycles)	UNE-EN ISO 12947-2	>60.000 @ 12 kPa

OTHER PARAMETERS	METHOD	VALUE
Warp shrinkage (%)	ISO 15797 5 X 60 °C	< -3
Weft shrinkage (%)	ISO 15797 5 X 60 °C	< -3

New Kerlast

Composition: Aramid | Viscose FR
Antistatic Fiber | Elastane

Ref: 15720

NEW KERLAST fabric is a lightweight (230 g/m²) elastic fireproof fabric designed for high comfort in multi-risk protective garments. Its aramid and Lenzing™ FR blend provides excellent protection, breathability and durability, making it ideal for overalls, jackets and trousers.

Color Range



4557
Blue



701030
Sand

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
Pilling	UNE-EN ISO 12945-2	4
Tear strength in Warp (N)	UNE-EN ISO 13937-2	80
Tear strength in Weft (N)	UNE-EN ISO 13937-2	80
Elasticity (%)	ASTM-D3107	# > 15

OTHER PARAMETERS	METHOD		VALUE
Warp shrinkage (%)	ISO 5077	5 X 60 °C	< -3
Weft shrinkage (%)	ISO 5077	5 X 60 °C	< -3

CERTIFICATION

EN ISO 11612 | EN 1149-5
 EN ISO 15384 | EN 16689 | EN IEC 61482-1-1

Wildland 270

Composition: Viscose FR | Meta-aramid
Para-aramid | Antistatic Fiber

Ref: 8563

WILDLAND 270 fabric is a lightweight (270 g/m²) fireproof and antistatic fabric developed for wildland firefighting garments. Its Lenzing™ FR and aramid blend offers high resistance, comfort and durability in demanding outdoor conditions.

Color Range



10045
Yellow



20015
Orange



63066
Green

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	650
Pilling	UNE-EN ISO 12945-2	4
Tear strength in Warp (N)	UNE-EN ISO 13937-2	25
Tear strength in Weft (N)	UNE-EN ISO 13937-2	25
Abrasion (cyclos)	UNE-EN ISO 12947-2	70.000 @ 12 kPa

OTHER PARAMETERS	METHOD	VALUE
Warp shrinkage (%)	ISO 5077 5 X 75 °C	< -3
Weft shrinkage (%)	ISO 5077 5 X 75 °C	< -3



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



