



SUMMARY

FFS3000 FIREFIGHTER SUITS IN ACCORDANCE WITH THE STANDARD EN ISO 13688:2013

TEST	RESULTS	REQUISITES	REPORT No. & NOTIFIED BODY
Determination of chromium (VI)	Not applicable	< 3mg/kg	---
Nikel discharge	Not applicable	< 0.5µg/cm ² for week	---
pH determination	External fabric Achieved	Between 3.5 and 9.5	2015EP0560 AITEX
	Moisture barrier Achieved		2015CO1985 AITEX
	Lining Achieved		
Determination of forbidden azoic colorants	External fabric Not detected	None detected	2015EP0560 AITEX
	Moisture barrier Not detected		2015CO1985 AITEX
	Lining Not detected		
Design	Achieved	Point 4.4 in the standard	2015CO1985 AITEX
Ergonomics	Achieved	Point 4 in the standard	2015CO1985 AITEX
Dimensional stability after 25 washing cycles 40°C	External fabric Warp: -2,0% Weft: -1,0%	According to the point 5.3 of the standard ISO 13688 ≤ ±3% (woven) or ≤ ±5% (knitted)	2015CO1985 AITEX
	Lining Warp: -2,5% Weft: -1,0%		
Tallaje Sizing	Achieved	Point 6 in the standard	2015CO1985 AITEX



SUMMARY

FFS3000 FIREFIGHTER SUITS IN ACCORDANCE WITH THE STANDARD UNE-EN 469:2006/1M:2007

TEST	RESULTS	REQUISITES	REPORT No. & NOTIFIED BODY
Design	Achieved	Point 4 in the standard	2015CO1985 AITEX
Limited flame spread after 25 washing cycles to 40°C (Procedure A). Outer surface	Achieved	Index 3 according EN 533:1997 No melt No hole after flame time ≤ 2 s afterglow time ≤ 2 s.	2015CO1985 AITEX
Limited flame spread after 25 washing cycles to 40°C (Procedure A). Inside surface	Achieved	Index 3 according EN 533:1997 No melt No hole after flame time ≤ 2 s afterglow time ≤ 2 s.	2015CO1985 AITEX
Limited flame spread after 25 washing cycles to 40°C (Procedure A). Cuff	Achieved	Index 3 according EN 533:1997 No melt No hole after flame time ≤ 2 s afterglow time ≤ 2 s.	2015CO1985 AITEX
Limited flame spread after 25 washing cycles to 40°C (Procedure A). Seams	Achieved	Index 3 according EN 533:1997 No melt No hole after flame time ≤ 2 s afterglow time ≤ 2 s.	2015CO1985 AITEX
Limited flame spread after 25 washing cycles to 40°C (Procedure A). Hardware	Achieved	Index 3 according EN 533:1997 No melt No hole after flame time ≤ 2 s afterglow time ≤ 2 s. Hardware must continue working	2015CO1985 AITEX



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FFS3000 FIREFIGHTER SUITS IN ACCORDANCE WITH THE STANDARD UNE-EN 469:2006/1M:2007

TEST	RESULTS	REQUISITES	REPORT No. & NOTIFIED BODY
Heat transfer – flame, after 25 washing cycles to 40°C	Level 2 HTI24: 21,6s HTI24 - HTI12: 6,9s	Level 2 HTI24 \geq 13 / HTI24 - HTI12 \geq 4	2015CO1985 AITEX
Radiant heat after 25 washing cycles to 40°C	Level 2 RHTI24: 21,6s RHTI24- RHTI12: 6,8s	Level 2 RHTI24 \geq 18 RHTI24- RHTI12 \geq 4	2015CO1985 AITEX
Tensile strength resistance principal fabric, after 5 washing cycles to 60°C and after radiant heat exposition	Warp: 1100N Weft: 960N	\geq 450 N	2015CO1985 AITEX
Heat resistance (all fabrics)	Achieved	No melt No drip No ignite No shrink by more than 5 %	2015CO1985 AITEX
Heat resistance furnitures	Achieved	No melt No drip No ignite Hardware must work after the test	2015CO1985 AITEX
Tensile strength resistance	Warp: 1200N Weft: 1100N	\geq 450 N	2015CO1985 AITEX
Main seam strength	470N	\geq 225 N	2015CO1985 AITEX
Tear strength	Warp: 64N Weft: 60N	\geq 25 N	2015CO1985 AITEX
Surface wetting, after 4 washing cycles to 40°C	ISO 4	\geq ISO 4	2015CO1985 AITEX
Dimensional stability after 25 washing cycles 40°C	External fabric Warp: -2,0% Weft: -1,0%	According to the point 6.9 of the standard UNE-EN 469 $\leq \pm 3\%$	2015CO1985 AITEX
	Lining Warp: -2,5% Weft: -1,0%		



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FFS3000 FIREFIGHTER SUITS IN ACCORDANCE WITH THE STANDARD UNE-EN 469:2006/1M:2007

TEST	RESULTS	REQUISITES	REPORT No. & NOTIFIED BODY
Resistance to penetration, after 25 washing cycles to 40°C	NaOH 40% IP=0% / IR=99.9% HCl 36% IP=0% / IR=91.9% H ₂ SO ₄ 30% IP=0% / IR=95.5% o-xylene 100% IP=0% / IR= 84.7%	Penetration 0% Repelence > 80%	2015CO1985 AITEX
Resistance to water penetration, after 4 washing cycles to 40°C	Seams Level 2 >20kPa	Level 2 ≥20kPa With moisture barrier	2015CO1985 AITEX
Water vapour resistance, after 25 washing cycles to 40°C	Level 2 14,47 m ² ·Pa/W	Level 2 ≤ 30 m ² ·Pa/W	2015CO1985 AITEX
Ergonomic	Achieved	According Annex D	2015CO1985 AITEX
Visibility	Achieved	Point 6.14 in the standard	2015CO1985 AITEX



SUMMARY

FFS3000 FIREFIGHTER SUITS RETROREFLECTIVE

TEST	RESULTS	REPORT No. & NOTIFIED BODY
Coefficient of retroreflection of new material	Achieved	Z 5576/12-6840/12 STFI
Coefficient of retroreflection after abrasion	Achieved	Z 5576/12-6840/12 STFI
Coefficient of retroreflection after flexion	Achieved	Z 5576/12-6840/12 STFI
Coefficient of retroreflection after folding at cold temperatures	Achieved	Z 5576/12-6840/12 STFI
Coefficient of retroreflection after temperature variation	Achieved	Z 5576/12-6840/12 STFI
Coefficient of retroreflection after 60 cycles washing at 60°C	Achieved	Z 5576/12-6840/12 STFI
Coefficient of retroreflection after 50 cycles dry cleaning	Achieved	Z 5576/12-6840/12 STFI
Coefficient of retroreflection after the influence of rainfall.	Achieved	Z 5576/12-6840/12 STFI



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CE

certificado CE de tipo

CERTIFICATE N° 0161/4228/15
PPE TYPE FFS3000 FIREFIGHTER
SUITS

AITEX, Notified Body No 0161 for the application of Directive 89/686/EEC of 21st December 1989 (O.G.E.C. of 30.12.1989), Royal Decree 1407/1992 of 20th November, in which the minimum requirements that Personal Protective Equipment (PPE) must comply with are set forth.

CERTIFIES:

The Company: ZIEL TEKNOLOJI VE ENDUSTRUYEL
URUNLER
PERPA TICARET MERKEZI B BLOK
KAT:13 No.2418 SISLI ISTANBUL
TURKEY
TR-34384 SISLI ISTANBUL

Rev. 2

This revision
cancels and replaces
the previous

AITEX, Notified Body No 0161 for the application of Directive 89/686/EEC of 21st December 1989 (O.G.E.C. of 30.12.1989), Royal Decree 1407/1992 of 20th November, in which the minimum requirements that Personal Protective Equipment (PPE) must comply with are set forth.

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PERPA TICARET MERKEZI B BLOK KAT:13 No.2418
SISLIISTANBUL TURKEY
TR-34384 SISLI ISTANBUL

Has obtained **EC TYPE EXAMINATION INSPECTION CERTIFICATION**, in compliance with what is stated in Directive 89/686/EEC and in agreement with the applicable test procedures according to standards *EN ISO 13688:2013* General requirements and *UNE-EN 469:2006/1M:2007* against risks in the operation of firefighting and related activities (Xf2, Xr2, Y2, Z2), having attained the levels of provision specified in **TEST REPORT N°2015CO1985** and in **PPE'S TECHNICAL DOCUMENTATION**.

Said certification is valid for the following articles:

PPE TYPE “FFS3000 FIREFIGHTER SUITS” destined to the protection of the user's body against risks in the operation of firefighting and related activities.

Manufactured by: ZIEL TEKNOLOJI VE ENDUSTRUYEL URUNLER

PPE DESCRIPTION:

A set comprising jacket and trousers in navy blue exterior fabric, with waterproof membrane, grey non-woven thermal insulating layer and grey woven grey lining. The two internal layers are hemmed inside: Each garment has 5 cm-wide reflective bands, fluorescent yellow on the edges and silver grey in the centre in the following distribution:

- Two around the body, sleeves and legs horizontally.
- One each side of the back and on each forearm vertically linking the horizontal bands. **JACKET:** Garment comprising front and rear pieces, sleeves, collar and cuffs. The two front pieces are straight and made from a single piece of fabric joined down the centre with a metal zip running from the bottom of the collar to 10 cm from the hem and covered by a 10 cm-wide flap sewn to the left-hand side and fastening over the right with self-fastening tape. The zip is also covered by a 3 cm-wide interior flap, which is an extension of the right-hand front piece. At the left-hand breast is a pocket with horizontal opening and flap fastened with self-fastening tape. At the seam is a vertical strip of self-fastening tape (hook face). At the waist either side is a pocket with horizontal opening and flap fastened with self-fastening tape. The left-hand pocket has a strip of fabric at the seam which fastens to itself with two metal snap buttons and the inside lower right front has a pocket with horizontal opening is a pocket with horizontal opening fastened with self-fastening tape. The back is made from a single straight piece of fabric and has a hanging loop and size label at the collar seam, and 10 cm.

below this a garment identification label. The sleeves are made from three pieces of fabric sewn together, two vertically and one at the underarm. The cuff is made from an interior backstitched hem and adjusts with a piece of self-fastening tape. A blue knitted elasticated storm cuff is included inside the cuff. A loop of fabric is sewn to the outer cuff and there is another on the inside sleeve seam. The collar is rectangular with rounded edges and fastens at the throat with a strip of fabric sewn to the left-hand wing and fastening over the right with self-fastening tape. The bottom is made by an interior backstitched hem. TROUSERS: Comprising front and rear pieces, waistband and braces: The two front pieces are joined at the crotch and to the backs at the inside and outside-leg seams. The fly has an interior pleat and fastens with a strip of self-fastening tape. The seat is made from two pieces of fabric joined at the crotch and the inside right has a size label and 5.5 cm below this a garment identification label. The waistband is rectangular and measures 4 cm in height. It closes at the front with a metal snap button and the sides are elasticated for adjustment. There are two belt loops at the front to accept the plastic quick-release buckles for the braces and two braces are attached at the back with a seam. The braces are made in maroon elasticated material, and cross at the back. Each brace has a black plastic adjuster and a black plastic quick-release buckle at the end. The trousers end in an interior backstitched hem

The materials that form the PPE, are described in the test report n° 2015CO1985



It shall be the manufacturer's sole responsibility to furnish specific information pertaining to this certificate and the tested levels of protection.

PPE's CAT. III shall be submitted to control tests according to the Art. 11 of the Directive 89/686/EEC.

ALCOY, 28th of August of 2015



Silvia Devesa Valencia
INNOVATION MANAGER



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instituto
tecnológico
textil

Plaza Emilio Sala, 1
03801 Alcoy (Alicante) SPAIN
Tel.: +34 965 542 200
Fax: +34 965 543 494
E-mail: info@aitex.es
www.aitex.es
www.observatoriotextil.com



The accredited ENAC tests are available at the institute quality department



FFS3000

KAHRAMANLAR İÇİN FOR HEROES





EN 469:2005 Xf2 Xr2 Y2 Z2 Level 2
Marine Equipment Directive (MED) Module B

FFS3000

Dış kat : Nomex® Outershell Tough %75 Meta Aramid , %23 Para Aramid , % 2 Anti statik
Nesf Bariyeri: Nefes alabilir PU membran kaplı alev almaz kumaş
Isı bariyeri : Aramid/Viscose FR 50/50 iç astara kapitone edilmiş Aramid keçe
Aramid dikiş ipliği, alev almaz tekstil fermuar
Alev almaz panik fermuar
Reflektif şerit : Aramid 5 cm sarı-gri-sarı
Cekette bir adet telsiz cebi, iki adet alt cep, bir adet iç cep
Kollarda ayarlanabilir cırtlı pat ve ribana
Cırtlı ve çıt cırtlı fermuar
Pantolonda ayarlanabilir askı
İki adet kargo cebi /opsiyonel
Dirsek ve dizde takviye kumaşı /opsiyonel



DuPont™
Nomex

FFS3000

Outershell: Nomex® Outershell Tough 75 % Meta Aramid , 23 % Para Aramid , 2 % Antistatic
Moisture Barrier: FR fabric with high breathable PU coated membrane
Heat Barrier: Aramid felt quilted to Aramid/Viscose FR 50/50 inner liner
Aramid Sewing Thread
Flame Retardant velcros
FR One way open panic quick release system
Aramid backing 5 cm yellow-grey-yellow reflective Tapes
Concealed zip front to neck
One radio pocket with flap, two side pocket with flap on jacket
FR velcro fastener on wrist for adjustment.
Aramid knitted fabric cuffs
Front opening with a FR velcro and stud on front of trousers
Elasticated waist
Elastic and adjustable brace which are attached to the rear of the trousers waist
Two covered cargo pockets.
Support fabric layer on the knees
Two covered cargo pockets/Optinal
Support fabric layer on elbow and knees /Optinal



CAT III
EN 469:2005 Xf2 Xr2 Y2 Z2 Level 2
Marine Equipment Directive (MED) Module B





Koruma Seviyesi / Protection Level



EN ISO 13688:2013
EN 469:2005 Xf2 Xr2 Y2 Z2 Level 2
EN 1149-5:2018
Marine Equipment Directive (MED) Module B

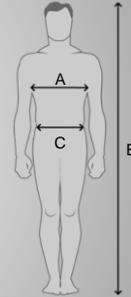
Renk seçenekleri: Sarı, Lacivert, Kırmızı
Colours : Navy blue, Yellow, Red

Beden aralığı / Sizes : S-M-L-XL-2XL-3XL

Beden / Sizes

A- Göğüs ölçüsü / Chest measurement of the user (cm)
B- Boy ölçüsü / Total height of the user (cm)
C- Bel ölçüsü / Waist measurement of the user (cm)

Beden / Size	A	B	C
S	80-92	164-170	78-86
M	88-100	168-174	86-94
L	96-108	172-178	94-102
XL	104-116	176-182	102-110
2XL	112-124	180-186	110-118
3XL	120-132	184-190	118-1126



Yıkama Talimatları / Washing and cleaning:



- Maksimum yıkama sıcaklığı 40°C (104°F).
- Ağartıcı, çamaşır suyu, beyazlatıcı kullanmayın.
- Yumuşatıcı kullanmayın.
- Orta-düşük sıcaklıkta (110°C) ütüleyin.
- Gölgede asarak kurutun.
- Düşük sıcaklıkta tamburlu kurutma.

- Do not wash above 40°C (104°F).
- Do not bleach.
- Do not use fabric softeners
- Iron at 110°C.
- Dry in a shaded area by hanging..
- Tumble-dry at reduced temperature.

OUTER FABRIC TECHNICAL SPECIFICATION

Composition:	75 % meta – aramid / 23% para -aramid / 2% antistatic			
Weave:	Twill weave			
Property - Fabric	Dimension	Test Results		Test Method
<u>EN 11612</u>				
Heat resistance		lengthwise	across	ISO 17493:2000, 5 minutes, (180 ±5) °C
shrinkage	%	Max. ±1,5	Max. ±1,5	
melt, drip, ignition		No		
Limited flame spread A1		New & after pre-treatment		EN ISO 15025:2016 Method A, Method B
Surface ignition		lengthwise	across	
Further flaming to top or sides		No	No	
Flaming or melting debris		No	No	
Hole formation		No	No	
Afterflame time	s	0	0	
Afterglow time	s	0	0	
Dimensional change		lengthwise	across	EN ISO 5077:2008 / EN ISO 3759:2011
	%	Max. ±2,5	Max. ± 2,5	
Tensile Strength		lengthwise	across	EN ISO 13934-1:2013
	N	Min. 1000	Min. 1000	
Tear Strength		lengthwise	across	EN ISO 13937-2:2001
	N	Min. 50	Min. 45	
Convective heat - B		Single values		ISO 9151:2016
Heat transfer index HTI 24	s	Min. 6,0		
Radiant heat - C		Single values		EN ISO 6942:2002, qo=20 kW/m2
Heat transfer index RHTI 24	s	Min. 10		
Contact heat - F		Single values		ISO 12127-1:2007 Temp Tc:250 C
Threshold time Tt	s	Min. 5		
<u>EN 1149-5:</u>				EN 1149-3:2004 Method 2
Half decay time t50	s	< 0,01		
Shielding factor S		0,96		