

Pecs - trousers

- Description**
- 2 side holes with flap
 - 1 back wide pocket with flap
 - 1 side pocket
 - bottom opening with zip
 - elasticated waist
 - YKK zip
 - 3MTM Scotchlite™ Reflective Material flame-retardant reflex strips - 8935 Silver Fabric
 - pictograms standards embroidered on the side pocket
 - garment suitable to be used in ATEX environments
 - thermo welded seams

Maintenance Maximum wash temperature: 40°C; do not bleach; drying in tumble dryer allowed; do not iron; do not dry cleaning.



WINTER MULTIPROTECT FR

EN 340



EN ISO 11812:2008
Exterior Index 1/20H/40
Interior Index 3/5H/40



UNI EN 343:2008



EN 1149-5:2008



EN 13034/A1:2009
Type 6



UNI EN 471:2008



Item	V343-0-02 (yellow fluo/navy) V343-0-03 (orange fluo/navy)	
Standards	 EN 340:2003 EN ISO 14116:2008 Exterior Index 1/30H/40 Interior Index 3/5H/40	 EN 1149-5:2008 EN 13034:2005+A1:2009 TYPE 6 EN 471:2003+A1:2007
	 EN 343:2003+A1:2007 +Cor.1:2009	 EN 343:2003+A1:2007 +Cor.1:2009
Sizes	S-4XL	

SAFETY TECHNICAL SPECIFICATIONS

	Test method	description	Cofra result	Minimum requirement / range
Background fabric	EN ISO 1833-1977, SECTION 10	Composition:	98% Polyester FR 2% Carbon	
	EN ISO 12127:1996	Fabric mass per unit area	250 g/mq	
	EN340: 2003 4.2 (prEN 14362-1)	Search of the aromatic and carcinogenic amines	Not recording	≤30 ppm
	EN340: 2003 4.2 (ISO 3071)	Determination of pH of aqueous extract	Yellow pH =6.3 Orange pH=6.0	3,5 ≤pH≤ 9,5

EN 471:2003+A1:2007 5.1.1	Chromaticity – before xenon	YELLOW X : 0.3721 Y : 0.5365 β_{min} : 1.0929	co-ord X: 0.387 0.536 0.398 0.460 Luminance factor $\beta_{min} > 0.7$	co-ord Y: 0.610 0,494 0,452 0,540
EN471:2003+A1 :2007 5.2 (EN ISO 105-B02 :1994)	Chromaticity – after xenon	YELLOW X :0.3712 Y :0.5306 β_{min} : 1.1039	co-ord X: 0.387 0.536 0.398 0.460 Luminance factor $\beta_{min} > 0.7$	co-ord Y: 0.610 0,494 0,452 0,540
EN 471:2003+A1:2007 5.1.1	Chromaticity – before xenon	ORANGE X : 0.5919 Y : 0.3616 β_{min} :0.5673	co-ord X: 0.610 0.535 0.570 0.655 Luminance factor $\beta_{min} > 0.4$	co-ord Y: 0.390 0,375 0,340 0,345
EN 471:2003+A1:2007 5.1.1	Chromaticity – after xenon	ORANGE X : 0.5658 Y : 0.3646 β_{min} :0.5960	co-ord X: 0.610 0.535 0.570 0.655 Luminance factor $\beta_{min} > 0.4$	co-ord Y: 0.390 0,375 0,340 0,345
EN 471:2003+A1:2007 5.3.1 (ISO 105-X12)	Colour fastness to rubbing	dry: 4-5		dry: 4
EN 471:2003+A1:2007 5.3.2 (ISO 105-E04)	Colour fastness to perspiration Colour change Staining:	Acidic 4-5 4-5	Alkaline 4-5 4-5	Colour change : 4 Staining: 3
EN 471:2003+A1:2007 5.3.3 (domestico : ISO 105-C06)	Colour fastness to washing Colour change Staining	4-5 4-5		Colour change: 4-5 Staining: 4
EN 471:2003+A1:2007 5.3.3 (ISO 105-D01)	Colour fastness to dry cleaning Colour change Staining	4-5 3-4		Colour change: 4 Staining: 4

	EN 471:2003+A1:2007 5.3.3 (ISO 105-X11)	Colour fastness to hot pressing (200°C) Colour change Staining	4-5 4-5	Colour change: 4-5 Staining: 4		
	EN 471:2003+A1:2007 5.4.1 (ISO 5077)	Determination of dimensional change	warp: -2.3% weft: -0.3%	+/- 3%		
	EN 471:2003+A1:2007 5.5.3 (EN ISO 13934-1)	Tensile strength	warp: 1348 N strength /fabric mass =5.4 weft: 1604 N strength /fabric mass =6.5	Warp > 450 N strength /fabric mass =>=2 Weft > 450 N strength /fabric mass =>=2		
Non- fluorescent material navy	EN340: 2003 4.2 (ISO 3071)	Determination of pH of aqueous extract	pH=6.0	3,5 ≤pH≤ 9,5		
	EN340: 2003 4.2 (prEN 14362-1)	Search of the aromatic and carcinogenic amines	Not recording	≤30 ppm		
	EN 471:2003+A1:2007 5.3.1 (ISO 105-X12)	Colour fastness to rubbing	dry: 4-5	dry: 4		
	EN 471:2003+A1:2007 5.3.2 (ISO 105-E04)	Colour fastness to perspiration Colour change Staining:	Acidic	Alkaline	Staining: 3	
			4-5	4-5		
			acetate	4-5		4-5
			cotton	4-5		4-5
			nylon	4-5		4-5
EN 471:2003+A1:2007 5.3.3 (ISO 105-C06)	Colour fastness to washing (40°C) Staining:	polyester	4-5	4-5		
		acrylic	4-5	4-5		
		wool	4-5	4-5		
			4-5			
			4-5			
EN 471:2003+A1:2007 5.3.3 (ISO 105-X11)	Colour fastness to hot pressing (150°C) Staining:	4-5	Staining: 4			

EN 471:2003+A1:2007	Colour fastness to dry cleaning		
5.3.3	Staining:		Staining: 4-5
(ISO 105-D01)	acetate	4-5	
	cotton	4-5	
	nylon	4-5	
	polyester	4-5	
	acrylic	4-5	
	woll	4-5	

Background fabric and Non-fluorescent material	EN ISO 14116:2008	Requirements for limited flame spread index 1	PASS	<ul style="list-style-type: none"> - No specimen shall permit any part of the lowest boundary of any flame or hole to reach the upper or vertical edge - No specimen shall give off flaming debris - No afterglow shall spread from the carbonized area to the undamaged area after the cessation of flaming 														
	6.1 (EN ISO 15025)	- As received - after Pre-Treatment (30 washes EN ISO 6330 5A)	INDEX 1/30H/40															
	EN 1149-5:2008 4.2.1 (EN 1149-1)	Electrostatic properties. Surface resistivity	Yellow R= 4.0 x 10 ⁸ Orange R= 3.6 x 10 ⁸	R<2,5 X 10 ⁹														
	EN 1149-5:2008 4.2.1 (EN 1149-3)	Induction decay	Yellow t50< 0.01 s S = 0.76 Orange t50< 0.01 s S = 0.77	t50 < 4 s S > 0,2														
	EN 343:2003+A1:2007 4.2 (EN 20811)	Water penetration resistance - Wp [Pa] (before each pretreatment)	> 13000 Pa	CLASS 1 Wp >= 8000 Pa CLASS 2 no test required CLASS 3 no test required														
	EN 343:2003+A1:2007 4.2 (EN 20811)	Water penetration resistance - Wp [Pa] (after each pretreatment)	Wp> 13000 Pa CLASS 3	CLASS 1 no test required CLASS 2 Wp>= 8.000 Pa CLASS 3 Wp >= 13.000 Pa														
	EN 343:2003+A1:2007 4.3 (EN 31092)	Water vapour resistance Ret [m ² Pa/W]	Ret =16.4 m ² Pa/W CLASS 3	CLASS 1 Ret>40 CLASS 2 20<Ret<40 CLASS 3 Ret<=20														
	EN 14325:2004 4.4 (EN 530)	Abrasion Resistance	CLASS 6 >2000 cycles	<table border="1" data-bbox="1259 1659 1557 1915"> <thead> <tr> <th>CLASS</th> <th>cycles</th> </tr> </thead> <tbody> <tr> <td>6</td> <td>>2 000</td> </tr> <tr> <td>5</td> <td>>1 500</td> </tr> <tr> <td>4</td> <td>>1 000</td> </tr> <tr> <td>3</td> <td>>500</td> </tr> <tr> <td>2</td> <td>>100</td> </tr> <tr> <td>1</td> <td>>10</td> </tr> </tbody> </table>	CLASS	cycles	6	>2 000	5	>1 500	4	>1 000	3	>500	2	>100	1	>10
CLASS	cycles																	
6	>2 000																	
5	>1 500																	
4	>1 000																	
3	>500																	
2	>100																	
1	>10																	

EN 14325:2004
4.7
(EN ISO 9073-4)

Trapezoidal tear resistance

CLASS 4
Warp 118.3 N
Weft 89.0 N

CLASS	N
6	>150 N
5	>100 N
4	>60 N
3	>40 N
2	>20 N
1	>10 N

EN 14325:2004
4.9
(EN ISO 13934-1)

Tensile strength

CLASS 6
Warp 1348N
Weft 1604 N

CLASS	N
6	1 000 N
5	>500 N
4	>250 N
3	>100 N
2	>60 N
1	>30 N

EN 14325:2004
4.10
(EN ISO 6530)

Puncture resistance

CLASS 3
57.7 N

CLASS	N
6	>250 N
4	>100 N
3	>50 N
2	>10 N
1	>5 N

EN 14325:2004
4.12
(EN ISO 6530)

Repellency by liquid chemicals

	Cl	Index
H ₂ SO ₄ (30%)	3	96.1%
NaOH (10%)	3	97.8%
o-Xylene	2	94.7%
Butan-1-ol	2	90.7%

CLASS	Index
3	>95%
2	>90%
1	>80%

EN 14325:2004
4.13
(EN 368)

Penetration by liquid chemicals

	Cl	Index
H ₂ SO ₄ (30%)	3	0.0%
NaOH (10%)	3	0.0%
o-Xylene	3	0.0%
Butan-1-ol	3	0.0%

CLASS	Index
3	<1%
2	<5%
1	<10%

Lining

EN ISO 1833-1977, SECTION 10 Composition: 99% Cotone FR

1% Carbonio

EN ISO 12127:1996 Fabric mass per unit area

190 g/mq

EN340: 2003
4.2
(prEN 14362-1)

Search of the aromatic and carcinogenic amines

Not recording

≤30 ppm

EN340: 2003
4.2
(ISO 3071)

Determination of pH of aqueous extract

pH =6.6

3.5 ≤pH≤ 9.5

EN 340:2003 4.2 (ISO 105-E04)	Colour fastness to perspiration Colour change Staining: acetate cotton nylon polyester acrylic wool	Acidic 4-5 4-5 4-6 4-5 4-5 4-5 4-5 4-5	Alkaline 4-5 4-5 4-5 4-5 4-5 4-5 4-5	1-5 1-5 1-5 1-5 1-5 1-5 1-5
EN 340:2003 5.3 (ISO 5077)	Determination of dimensional change	warp: -2.8% weft: -1.9%		+/- 3%
ISO 105-X12	Colour fastness to rubbing	dry: 4-5 wet 3-4		1-5
ISO 105-C06	Colour fastness to washing Colour change: Staining: acetate cotton nylon polyester acrylic wool	4-5 4-5 4-5 4-5 4-5 4-5 4-5		1-5
EN ISO 14116:2008 6.1 (EN ISO 15025)	Requirements for limited flame spread index 1 - As received - After Pre-Treatment (5 washes EN ISO 6330 5A)	PASS INDEX 3/5H/40		- No specimen shall permit any part of the lowest boundary of any flame or hole to reach the upper or vertical edge - No specimen shall give off flaming debris - No afterglow shall spread from the carbonized area to the undamaged area after the cessation of flaming - No specimen shall show hole formation - The afterflame time of each individual specimen shall not exceed 2 s
EN ISO 14116:2008 6.2.1 (EN ISO 13934-1)	Tensile strength	Warp 650 N Weft 230 N		>150 N

Reflex
3M Scotchlite
8935
flameretardant

EN ISO 1833-1977, SECTION 10
EN ISO 12127:1996

Composition:

100% meta-aramide
(Nomex)

Fabric mass per unit area:

220 g/mq

EN471:2003+A1:2007
6.1

Fotometric requirements of new PASS
retroreflective materials

EN471:2003+A1:2007
6.2

Requiements of retroreflective performance after tests for abrasion, flexion, folding at low temperature, thermic variations, washing (50 cycles ISO 6330 method 2A/E 60°C) and rain influence.

PASS
CLASS 2

DIN EN 469 :2007
Annex B.3.1

Heat resistance T=180 ° C

- as received PASS
- after Pre-Treatment (50 cycles ISO 6330 method 2A/E 60°C) PASS

DIN EN 469 :2007
Annex B.3.1

Heat resistance T=260 ° C

- as received PASS
- after Pre-Treatment (50 cycles ISO 6330 method 2A/E 60°C) PASS

DIN EN ISO 11612:2008 6.3.2
(UNI EN ISO 15025 Method A)

Limited flame spread

PASS A1
3/50H/60

St.Petersburg +Pecs	EN 471:2003+A1:2007 4.1	Minimum required areas of visible material in m ²	Background material 1.89 m ²	Background material CLASS3= 0.80m ²
		Size S	Retroreflective material 0.40 m ² CLASS 3	CLASS 2=0.50m ² CLASS1=0.14m ² Retroreflective material CLASS3=0.20m2 CLASS2=0.13m2 CLASS1=0.10m2
	EN 13034:2005+A1:2009 5.2 (EN ISO 17491-4)	Light spray test Type 6	PASS	