

CARRINGTON



Quality	TOMBOY
Fabric Weight	245gsm
Composition	Polyester 65% / Cotton 35%
Useable Width	150cm
Nominal Length	100cm
Weave	2/1 twill
Ends And Picks Per 2.5cm	86 X 52 Nominal
Thread Count	14's Ne (24's Nm)
Application	Workwear jackets, trousers and coveralls
Washing Instructions	

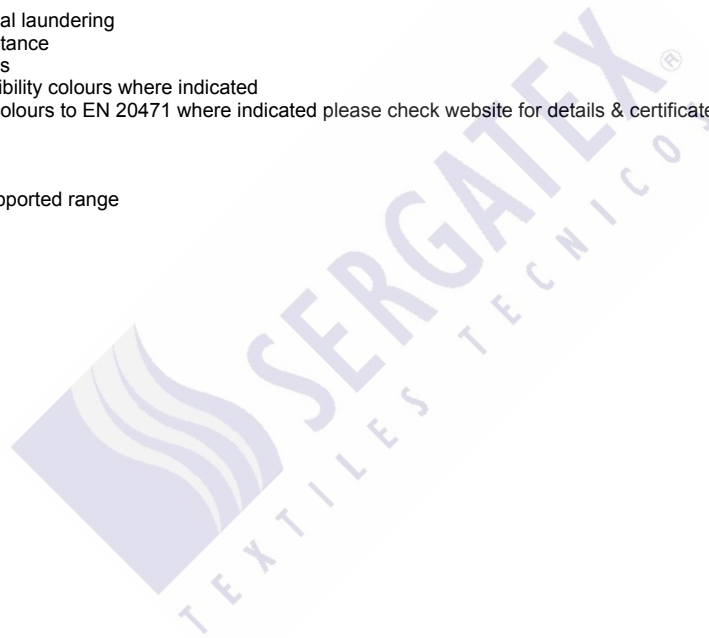


Summary

Tomboy is our top selling mens workwear fabric. It has been developed to meet stringent performance criteria and industrial laundering. It is extremely durable and hardwearing and retains its smart appearance after multiple laundering.

Key Features

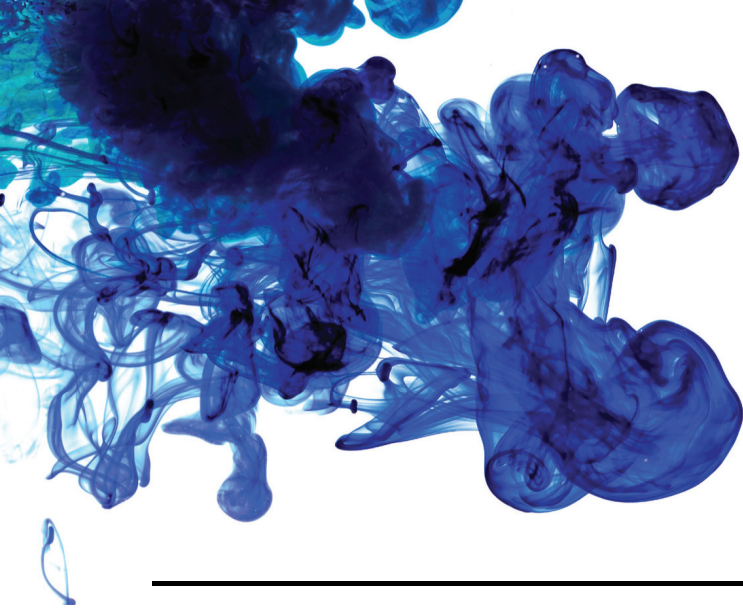
- Suitable for industrial laundering
- High abrasion resistance
- High colour fastness
- EN 20471 High Visibility colours where indicated
- High fast contrast colours to EN 20471 where indicated please check website for details & certificates
- UVPF protection
- Easy care finish
- Oeko-Tex certified
- Extensive stock supported range



Head Office (UK)
Carrington Workwear Ltd
Market Street
Adlington
Lancashire
PR7 4HJ
Tel: +44 (0)1257 476850
Fax: +44 (0)1257 476852
Email: info@carrington.uk.com
www.carrington.uk.com

France
Carrington
France Sarl
83 Rue de la Gare
59170 Croix
France
Tel: +33 (0)3 2098 6646
Fax: +33 (0)3 2098 6609
Email: france@carrington.eu.com
www.carrington.eu.com

Germany
Carrington
Deutschland GmbH
Hembergstr 24
27726 Worpswede
Germany
Tel: +49 (0)47 92 950191
Fax: +49 (0)47 92 950192
Email: germany@carrington.eu.com
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Physical Properties

	Warp	Weft
Tensile Strength: (BS EN ISO 13934-1:1999)	1400 N	800 N
Tear Strength: Mean of Maxima (BS EN ISO 13937-3:2000)	45 N	43 N
Tear Strength: Mean of Mean (BS EN ISO 13937-3:2000)	35 N	32 N
Washing Shrinkage (max): (BS EN ISO 6330:2001, 1A/D)	2%	2%
Heat Shrinkage (max): (DEF STAN 83-65/4 160°C)	2%	2%
Abrasion Resistance: (12kPa) (BS EN ISO 12947-2:1999)	50,000 rubs	
Pilling Resistance: (BS EN ISO 12945-2:2001)	4	

Colour Fastness

	Pale	Mid	Dark
Wash Fastness BS EN ISO 105-C06: Method E2S (95°C)			
Colour Change	4-5	4	4
Stain on Polyester	4	3-4	3
Stain on Cotton	4	3-4	2-3
Dry Clean Fastness BS EN ISO D01			
Colour Change	4-5	4	4
Perspiration Fastness BS EN ISO 105-E04: Acid/Alkali			
Colour Change	4-5	4-5	4-5
Staining	4	3-4	3
Rub Fastness BS EN ISO 105-X12:1995			
Wet	3-4	3	2
Dry	4-5	4	3-4
Light Fastness BS EN 20105/ISO 105-B02			
Light Fastness	4	4	4

These values are for guidance only, some colours will be better others worse. Please contact your Carrington representative for specific shade details.

Please consult Carrington for specific values.

Other Properties

High-visibility
EN 20471 Yellow 602
EN 20471 Contrast trims Bugatti 263* Graphite 357* Pale Grey 210* Red 531* Kelly 388*

Amended values for printed fabric

	Warp	Weft
Tear Strength: (BS EN ISO 13937-3:2000)	40 N	35 N
Abrasion Resistance: (12kPa) (BS EN ISO 12947-2:1999)	40,000 rubs	

Amended values for brushed fabric

Abrasion Resistance: (12kPa) (BS EN ISO 12947-2:1999)	40,000 rubs
Pilling Resistance: (BS EN ISO 12945-2:2001)	3

UVPF rating: (BS EN 13758-1) 40+

Pigment prints must be labelled as "do not dry clean". Washing symbol.

* Check with your Carrington representative for advised wash care conditions.

The data quoted is based upon specific materials and tested by sources believed to be reliable and Carrington make no guarantee, express or implied as to use, handling or possession of its products.

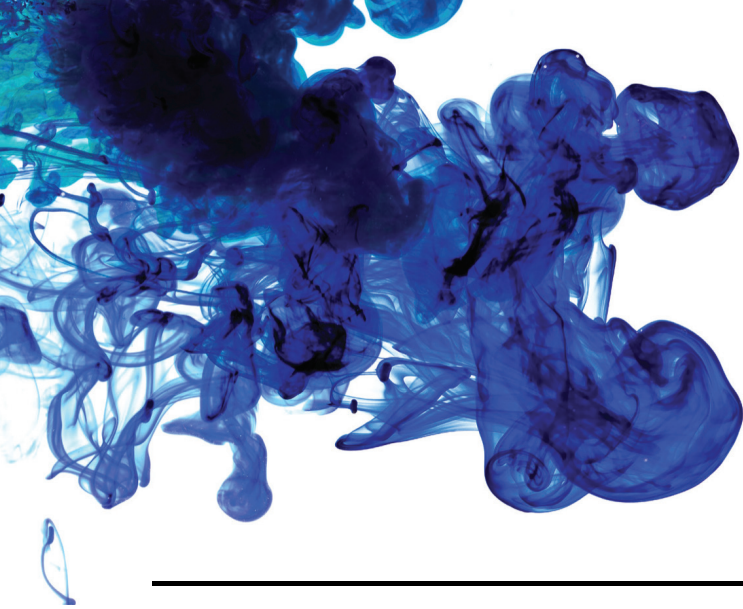
N.B. Although there may be small differences between the British Standard and the ISO test method quoted, they are the same in all major respects.

Authorised by: SVM

Issue Date: 12/07/2012

Issue No: 10

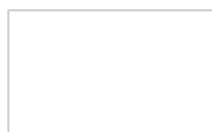
Status: Current



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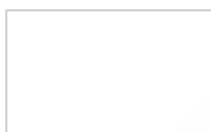
Colours



White 002



Winter White 16



High White 23



Silver 104



Safrane Grey 123



Pale Grey 178



Light Khaki 192



Pearl Grey 198



Hospital Blue 207



Postman 223



Button Blue 227- shade will no longer be stock supported once current stock is exhausted



Blade 228



Royal 231



Como 258



Nimbus Grey 259



Royal Box 262



Bugatti 268



Dove Grey 275



Mole Grey 294



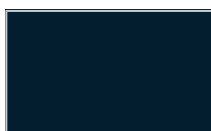
Kepi Brown 299



Lava 3001



Bottle 303



Marine 309



Spruce 314



Navy 321



Pine Green 332



Convoy Grey 352



Graphite 357



Saffron 370



Kelly Green 388



Seville Orange 405



Orange 410



Brigade Navy 416



Scan Red 424



Deep Navy 425



Brown 467



Black 506



Maroon 519



Red 531



Smokeberry 540- shade will no longer be stock supported once current stock is exhausted



HV Yellow 602



Azure 668- shade will no longer be stock supported once current stock is exhausted



Olive 8171e- shade will no longer be stock supported once current stock is exhausted



Sherwood 317





Client: Carrington Career & Workwear Ltd
Market Street
Adlington
Lancashire
PR7 4HJ

Entry No: 50462 & 50865

COMBINED TEST REPORT

Date Received: 19th April 2012 & 16th May 2012

Date Tests Completed: 31st May 2012

Client's Description: Sample of fabric Tomboy – 602 HV Yellow

Performance Standard: BS EN 471:2003 +A1:2007
Clause 5.1.1 Colour performance requirements of background materials
Clause 5.2 Colour after xenon test of background materials
Clause 5.3.1 Colour fastness to rubbing
Clause 5.3.2 Colour fastness to perspiration
Clause 5.3.3 Colour fastness to washing, dry cleaning and hot pressing (damp)
Clause 5.4 Dimensional change
Clause 5.5.1 Tensile strength of woven material
Clause 5.6 Water vapour resistance**

** Subcontracted test made by another UKAS Accredited Laboratory

**Note: Results for Clauses 5.1.1 and 5.2 were taken from Report 50865 dated 31st May 2012.
All the other results were taken from Report 50462 dated 14th May 2012.**

-----End of Page-----

This is hereby certified to be a correct return of the tests made of the items referred to herein.



1104

H Mackereth

Helen Mackereth
Senior Technician
1st June 2012

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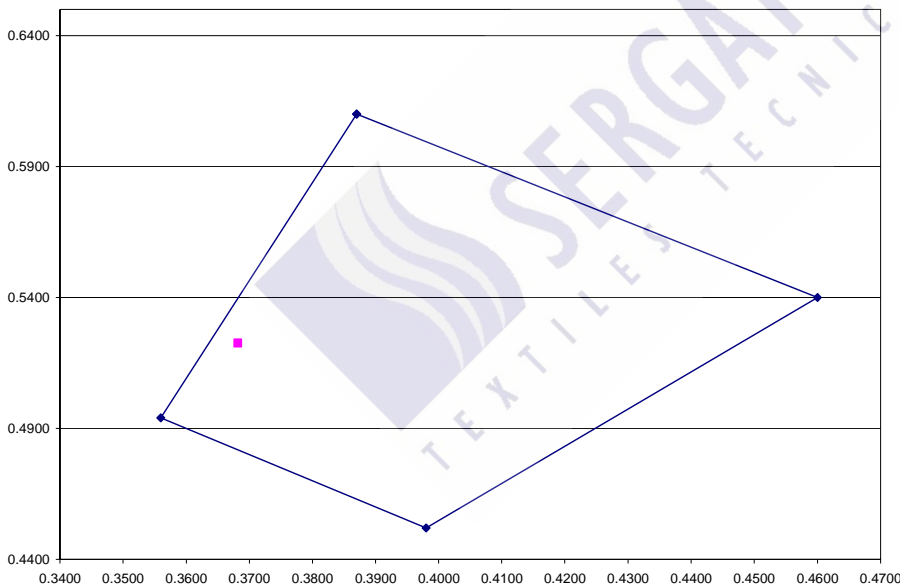
Client: Carrington Career & Workwear Ltd
Market Street
Adlington
Lancashire
PR7 4HJ

Entry No: 50462 & 50865

Results

BS EN 471 2003 Clause 5.1.1 and 5.2	Coordinates		Minimum Luminance factor β min	Pass/Fail
Fluorescent yellow	x	y	0.70	
	0.387	0.610		
	0.356	0.494		
	0.398	0.452		
	0.460	0.540		
Clause 5.1.1 As Received	x = 0.3682	y = 0.5226	Luminance factor = 0.95	Coordinates PASS Luminance PASS
Clause 5.2 After Xenon	x = 0.3589	y = 0.4964	Luminance factor = 0.90	Coordinates PASS Luminance PASS

EN 471 As Received



**Note: Results for Clauses 5.1.1 and 5.2 were taken from Report 50865 dated 31st May 2012.
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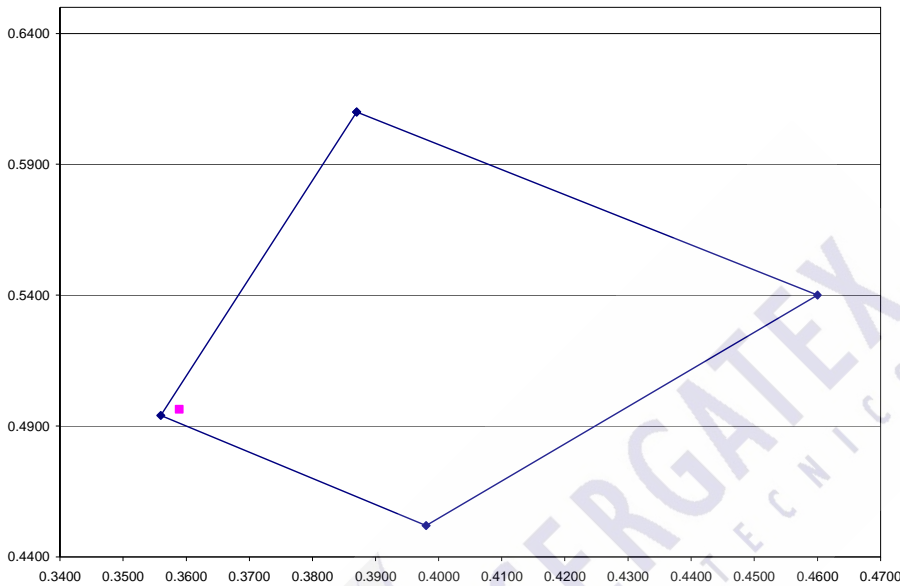




Client: Carrington Career & Workwear Ltd
Market Street
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Lancashire
PR7 4HJ

Entry No: 50462 & 50865

EN 471 After Xenon



Test Specification Fastness to Rubbing - BS EN 471/Clause 5.3.1/ISO 105 X12

	Result	Specification
Fastness to Dry Rubbing		
Length Way	4-5	4
Width Way	4-5	4

Comments

This fabric MEETS the requirements of BS EN 471:2003 + A1:2007 for fastness to rubbing.

**Note: Results for Clauses 5.1.1 and 5.2 were taken from Report 50865 dated 31st May 2012.
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Client: Carrington Career & Workwear Ltd
Market Street
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Lancashire
PR7 4HJ

Entry No: 50462 & 50865

Test Specification Fastness to Perspiration - BS EN 471/Clause 5.3.2/ISO 105 EO4:1996 (Withdrawn)

	Result		Specification
	Acid	Alkali	
Fastness to Perspiration			
Staining of Multi fibre			
Acetate	4	4	3
Cotton	4-5	4-5	3
Nylon	4	4	3
Polyester	4	4	3
Acrylic	4-5	4-5	3
Wool	4-5	4-5	3
Change in Colour	5	5	4

Comments

This fabric MEETS the requirements of BS EN 471:2003 + A1:2007 for fastness to perspiration.

Test Specification Fastness to Washing - BS EN 471/Clause 5.3.3/ISO CO6 C2S

	Result		Specification
	Acid	Alkali	
Fastness to Washing at 60°C			
Staining of Multi fibre			
Acetate	3-4		4
Cotton	4-5		4
Nylon	3		4
Polyester	4		4
Acrylic	4-5		4
Wool	4		4
Change in Colour	5		4-5

Comments

The fabric is suitable where materials are made from cotton, polyester, acrylic or wool.

**Note: Results for Clauses 5.1.1 and 5.2 were taken from Report 50865 dated 31st May 2012.
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Client: Carrington Career & Workwear Ltd
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PR7 4HJ

Entry No: 50462 & 50865

Test Specification Fastness to Dry Cleaning - BS EN 471/Clause 5.3/ISO 105 D01

	Result	Specification
Fastness to Dry Cleaning		
Staining of Multi fibre		
Acetate	5	4
Cotton	4-5	4
Nylon	4-5	4
Polyester	4-5	4
Acrylic	5	4
Wool	4-5	4
Change in Colour	5	4

Comments

This fabric MEETS the requirements of BS EN 471:2003 + A1:2007 for fastness to dry cleaning.

Test Specification Fastness to Hot Pressing (Damp) - BS EN 471/ISO 105 X11

	Result		Specification
	After Test	After 4 hours	
Fastness to Hot Pressing* (150°C) (Damp only)			
Staining of cotton	4-5	4-5	4
Change in colour	5	5	4-5

Comments

This fabric MEETS the requirements of BS EN 471:2003 + A1:2007 for fastness to hot pressing (damp) when using a temperature of 150°C.

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**West Yorkshire
Materials Testing
Service**

PO Box 5, Morley, LS27 0QP
Nepshaw Lane South, Morley, Leeds
Tel 0113 253 0241 Fax 0113 252 7029
Head of Laboratory G. Briggs C. Text ATI

Client: Carrington Career & Workwear Ltd
Market Street
Adlington
Lancashire
PR7 4HJ

Entry No: 50462 & 50865

Clause	Test Method	EN 471 Requirement & Performance Levels	Results	Pass/Fail
5.4 Dimensional change	ISO 5077	Max \pm 3% in accordance with EN 340 (- indicates shrinkage) (+ indicates extension)	<u>Length</u> <u>Width</u> -1.5% -0.5%	PASS
	Tests were made after 5 washing cycles in accordance with ISO 6330:2000 Procedure 2A at 60°C Drying Procedure E. The tumble drying was carried out after the completion of each wash.			
5.5.1 Tensile strength of woven material	<u>Mass</u> BS EN 12127 <u>Tensile</u> ISO 13934-1	In both the warp and weft directions, tensile strength divided by specific fabric mass (g/m^2) shall be \geq 2, with a minimum tensile of 400 N	<u>Mass</u> = 258 g/m^2 <u>Warp</u> Tensile = 1700 N Divided by mass = 6.6 <u>Weft</u> Tensile = 840 N Divided by mass = 3.3	PASS
5.6 Water vapour resistance**	EN 31092	Ret \leq 5 $\text{m}^2\text{Pa/W}$	Mean Ret = 2.68 $\text{m}^2\text{Pa/W}$	PASS

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