

**Bruck**  
Textiles

# Military Resource Guide

Protection - Comfort - Breathability - Durability



COMBAT AND NON-COMBAT UNIFORM FABRICS

[www.brucktextiles.com.au](http://www.brucktextiles.com.au)



# Combat Uniform Fabrics

## CAMOUFLAGE FABRICS

- With and without NIR Signature Management Camouflage
- Maritime Multicam Camouflage Pattern Uniform (MMPU)
- Australian Multicam Camouflage Uniform (AMCU)
- Australian Multicam Print Camouflage (AMP)
- Disruptive Pattern Naval Uniform (DPNU)
- Air Force General Purpose Uniform (GPU)
- Disruptive Pattern Camouflage Uniform (DPCU)

## FLYERS CLOTHING

- Protective garments for aircrew including Flying Suits and Cold Weather Flyers Ensembles
- Inherently flame resistant and antistatic
- Available in AMCU print, Sage Green and Desert Tan colours

## PROTECTIVE CLOTHING

- Ballistic Protection
- Fragment Protection

## WET AND COLD WEATHER ENSEMBLES

- Wet Weather Laminates
- FR Cold Weather Outerwear
- Cold and Extreme Cold Weather Underwear



# Non-Combat Uniform Fabrics

Bruck has a wide range of fabrics suitable for ceremonial and general service duties. Fabrics are available in various compositions and weights for end uses including Trousers, Shirts, Shorts, Hats, etc.

## STRUCTURAL FIREFIGHTING IN PBI AND NOMEX PARADE UNIFORMS AND GENERAL SERVICE DUTIES



# Disruptive Pattern Camouflage Uniform (DPCU)

This five colour disruptive pattern camouflage called DPCU was developed following aerial photographs of the Australian terrain to determine which colours and patterns would be most suitable for camouflage uniforms. The standard DPCU works in areas from arid bushland through to tropical jungle all over Australia.



Product	Composition	Width CM	Mass (g/m <sup>2</sup> )	Weave	Tensile Strength	Tear Strength	Breathability
DPCU Oxford	75/25 Cotton Polyester	147	155- 175	Oxford	Warp > 840 Weft > 440	Warp > 25 Weft > 20	$R_{et} \leq 6m^2 Pa/W$
DPCU Twill	75/25 Cotton Polyester	147	230 - 255	3/1 Twill	Warp > 1050 Weft > 650	Warp > 40 Weft > 40	$R_{et} \leq 6m^2 Pa/W$

# Disruptive Pattern Naval Uniform (DPNU)

DPNU is the naval version of the DPCU, consisting of the littoral colours of various shades of grey with greens. The disruptive pattern is not meant to provide camouflage but to align with the other Australian services which use the distinctly Australian pattern, making personnel identifiable as Australian, and through the use of the littoral colours as naval personnel. The fabric is flame retardant and maintains its FR properties after laundering and exposure to sea water.



Product	Composition	Width CM	Mass (g/m <sup>2</sup> )	Weave	Tensile Strength	Tear Strength	Breathability
DPNU Oxford	75/25 Cotton Polyester	147	238 - 262	Oxford	Warp > 840 Weft > 440	Warp > 25 Weft > 17	$R_{et} \leq 8m^2 Pa/W$
DPNU Twill	75/25 Cotton Polyester	147	285 - 315	Twill	Warp > 950 Weft > 650	Warp > 30 Weft > 40	$R_{et} \leq 8m^2 Pa/W$

# Australian Multicam Pattern (AMP)

The Australian Multicam Pattern is a unique version of the Multicam combat uniform worn by US, British and Australian troops in Afghanistan. The AMP provides a greater level of concealment across the range of terrains in Afghanistan – urban, desert and green and Iraq. Suitable for both combat and field environments.



Product	Composition	Width CM	Mass (g/m <sup>2</sup> )	Weave	Tensile Strength	Tear Strength	Breathability
AMP Twill	75/25 Cotton Polyester	147	230 - 255	3/1 Twill	Warp > 1050 Weft > 650	Warp > 40 Weft > 40	$R_{et} \leq 6m^2 Pa/W$
AMP Midweight Twill	75/25 Cotton Polyester	147	185 - 205	3/1 Twill	Warp > 860 Weft > 580	Warp > 28 Weft > 28 After 100% wet pick-up	$R_{et} \leq 6m^2 Pa/W$

# Maritime Multicam Pattern Uniform (MMPU)

New and unique camouflage developed exclusively for the Royal Australian Navy (RAN). Available in MMPU Sea and MMPU Shore versions. MMPU Sea has the fire retardant and antistatic properties. The fabric maintains its FR properties after laundering and exposure to sea water.



Product	Composition	Width CM	Mass (g/m <sup>2</sup> )	Weave	Tensile Strength	Tear Strength	Breathability
MMPU Oxford	75/25 Cotton Polyester	147	165 - 185	Oxford	Warp > 840 Weft > 440	Warp > 25 Weft > 20	$R_{et} \leq 6m^2 Pa/W$
MMPU Twill	75/25 Cotton Polyester	147	230 - 255	3/1 Twill	Warp > 1050 Weft > 650	Warp > 40 Weft > 40	$R_{et} \leq 6m^2 Pa/W$
MMPU FR	Multifibre blend	147	190 - 220	Plain	Warp > 800 Weft > 600	Warp > 30 Weft > 30	$R_{et} \leq 6m^2 Pa/W$

# Air Force General Purpose Uniform (GPU)

New uniform fabric provides the Royal Australian Air Force a modern and distinctive identity, clearly distinguishing it from the other services. This is a functional uniform to suit the Air Force's unique working environment, to be worn within the workplace and on non-work like operational duties such as deployment on humanitarian assistance and disaster relief operations.



Product	Composition	Width CM	Mass (g/m <sup>2</sup> )	Weave	Tensile Strength	Tear Strength	Breathability
GPU Oxford	75/25 Cotton Polyester	147	155 - 175	Oxford	Warp > 840 Weft > 440	Warp > 25 Weft > 20	$R_{et} \leq 6m^2 Pa/W$
GPU Twill	75/25 Cotton Polyester	147	230 - 255	3/1 Twill	Warp > 1050 Weft > 650	Warp > 40 Weft > 40	$R_{et} \leq 6m^2 Pa/W$

# Australian Multicam Camouflage Uniform (AMCU)

Developed by the Australian Defence Forces the AMCU was launched in 2014. The AMCU fabric is a multi-terrain capable camouflage for land close combat operations, all other land operations, field training, as well as a dress of the day uniform. The AMCU is made from a new hybrid pattern and colour palette that combines the pattern features of the Australian Multicam Pattern with the colour palette used for the Disruptive Pattern Camouflage Uniform.



Product	Composition	Width CM	Mass (g/m <sup>2</sup> )	Weave	Tensile Strength	Tear Strength	Breathability
AMCU Oxford	75/25 Cotton Polyester	147	165 - 185	Oxford	Warp > 840 Weft > 440	Warp > 25 Weft > 20	$R_{et} \leq 6m^2 Pa/W$
AMCU Twill	75/25 Cotton Polyester	147	245 - 265	3/1 Twill	Warp > 1050 Weft > 650	Warp > 40 Weft > 40	$R_{et} \leq 6m^2 Pa/W$
AMCU FR	Multifibre blend	147	190 - 220	Plain	Warp > 800 Weft > 600	Warp > 30 Weft > 30	$R_{et} \leq 6m^2 Pa/W$

# Flyers Clothing

## FLYERS CLOTHING

Spun Aramid fabrics for flying crew suits and ground crew suits provide a comfortable, lightweight and durable clothing solution for the Air Force and Armoured fighting crewmen. These inherent fire retardant and permanently antistatic fabrics offer protection against cockpit fires and extreme temperatures, exposure to dust and combustible gases, hot metallic surfaces and sharp edges and contact with petroleum, oils and lubricants. Available in Sage Green, Desert Tan and Camouflage print.



Product	Composition	Width CM	Mass (g/m <sup>2</sup> )	Weave	Tensile Strength (N)	Tear Strength (N)	Breathability
Flyers Twill	93% Meta Aramid 5% Para Aramid 2% Carbon (Antistatic Fibre)	147	190 ± 5%	Twill	Warp > 1050 Weft > 750	Warp > 55 Weft > 45	$R_{et} \leq 7\text{m}^2 \text{ Pa/W}$
Flyers Plain	93% Meta Aramid 5% Para Aramid 2% Carbon (Antistatic Fibre)	147	150 ± 5%	Plain	Warp > 800 Weft > 550	Warp > 45 Weft > 35	$R_{et} \leq 7\text{m}^2 \text{ Pa/W}$

## AIRCREW FR TRILAMINATES FOR COLD WEATHER

Flame resistant trilaminates for the Cold Weather Flyers Ensemble for Australian Defence Forces aircrew operating on ground and in-flight. This trilaminate outer shell fabric comprises of a Spun Aramid Antistatic blend with a breathable PTFE membrane and a spun aramid knitted scrim as the inner layer. Typically used as a multi-layer garment with a fleece inner lining. Available in Sage Green and printed Camouflage patterns.

Product	Composition	Width CM	Mass (g/m <sup>2</sup> )	Weave	Tensile Strength (N)	Tear Strength (N)	Breathability
Flyers Trilaminate	98% Aramid 2% Carbon Face/ PTFE Membrane 98% Aramid 2% Carbon Backing	140	242	Plain Face / Knit Back	Warp > 770 Weft > 550	Warp > 40 Weft > 30	$R_{et} \leq 18\text{m}^2 \text{ Pa/W}$

# Wet and Cold Weather Fabrics

## WET WEATHER LAMINATES

Flexible fabric solutions with either a combination of a shell fabric and a separate dropliner or a trilaminate comprising of a rugged polyester shell, hydrophylic breathable PU membrane and a fleece backing. These solutions are abrasion resistant, highly breathable and fully windproof.



Product	Composition	Width CM	Mass (g/m <sup>2</sup> )	Weave	Tensile Strength	Tear Strength	Breathability
Benbruckula WTR	100% Polyester	140	170	Plain	Warp > 850 Weft > 650	Warp > 20 Weft > 20	$R_{et} \leq 18\text{m}^2\text{Pa/W}$
Trilaminate Dropliner	100% Polyester	130	115	Warp Knit	Warp > 150 Weft > 200	Warp > 10 Weft > 10	$R_{et} \leq 18\text{m}^2\text{Pa/W}$
Benbruckula Trilaminate	100% Polyester	140	370	Plain	Warp > 850 Weft > 650	Warp > 20 Weft > 20	$R_{et} \leq 32\text{m}^2\text{Pa/W}$

A time tested trilaminate with 100% PES shell, PTFE membrane and 100% PES knit back. Bruck has supplied this wet weather fabric to the ADF since 2008 for the wet weather ensemble. Proven for performance, durability and excellent wearer comfort.

Product	Composition	Width CM	Mass (g/m <sup>2</sup> )	Weave	Tensile Strength	Tear Strength	Breathability
1714 Trilaminate	100% Polyester PTFE Membrane	140	190	Plain	Warp > 850 Weft > 650	Warp > 20 Weft > 20	$R_{et} \leq 18\text{m}^2\text{Pa/W}$

## FR COLD WEATHER OUTERWEAR

Bruck FR cold weather solutions come with an FR Aramid and PTFE trilaminate. This fabric has inherent FR properties combined with maximum breathability and water resistance. Available in Sage Green or Printed Camouflage.

Product	Composition	Width CM	Mass (g/m <sup>2</sup> )	Weave	Tensile Strength	Tear Strength	Breathability
FR Trilaminate	98% Aramid PTFE Membrane 2% Carbon	140	242	Plain	Warp > 770 Weft > 550	Warp > 40 Weft > 30	$R_{et} \leq 18\text{m}^2\text{Pa/W}$

## COLD WEATHER UNDERGARMENTS

Bruck XP Merino<sup>®</sup> fabric provides very comfortable and permanent fire retardant protective undergarments. This fabric is naturally anti-static with UV protection and odour reducing properties. This fabric provides next to body protection against threats of fire, radiant heat and other potentially hazardous environments.

Product	Composition	Width CM	Mass (g/m <sup>2</sup> )	Weave
XP Merino Interlock	50/50 Wool FR Viscose	150-160	252 - 278	Plain
XP Merino Knit	50/50 Wool FR Viscose	156	165 - 175	Plain



# Protective Clothing

## FRAGMENT PROTECTION

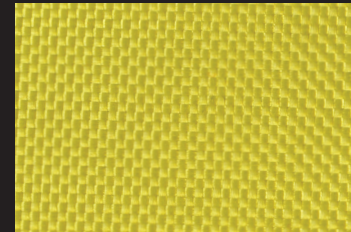
Developed in collaboration with Defence Materials and Technology Centre, a next generation next to skin protective apparel fabric. This new state of the art high strength fabric delivers improved level of fragmentaion protection against IEDs compared to the current combat uniform fabrics with minimal impact on comfort or mobility and performance of the soldier.



Product	Density (gsm)	Description	Widths (cm)
9917-24	265	High strength with improved protection against IEDs. Excellent wearer comfort.	147
9917-25	275	High strength with improved protection against IEDs. Excellent wearer comfort.	147

## BALLISTIC PROTECTION

Aramids for soft body armour, helmets and hard armour composites. Using a range of high tensile para-aramid yarns which are proven in protection applications, Bruck range of anti ballistics offers light weight, durable and cost effective solutions for different levels of threats such as bullets or fragments to suit individual customer needs.



Product Code	Density (gsm)	Description	Widths (cm)
BPS-A-1001	205	High Performance plain weave fabric, delivering a light-weight option when protection and comfort are important.	97, 120, 110 143, 160
BPS-A-CT709	200	TWARON® fabric specifications made from 930 D Tex microfilament yarn and is a highly recognised light-weight high performance anti-ballistic fabric.	120, 130
BPS-A-CT707	160	Manufactured from TWARON® microfilament 930 D Tex yarn, is often seen as a preferred low weight option for a specific ammunition application.	100, 120

# Non-Combat Fabrics

Bruck has a wide range of fabrics suitable for ceremonial and general service duties. Fabrics are available in various compositions and weights for end uses including Trousers, Shirts, Shorts, Hats, etc.



Product	Composition	Width CM	Mass (g/m <sup>2</sup> )	Weave	Tensile Strength (N)	Tear Strength (N)
Legacy	65% Polyester 35% Cotton	>147	135	Plain	Warp > 550 Weft > 600	Warp > 25 Weft > 35
Rapier	65% Polyester 35% Cotton	>147	160	Plain	Warp > 650 Weft > 650	Warp > 30 Weft > 30
Underground	65% Polyester 35% Viscose	>147	190	Plain	Warp > 1000 Weft > 750	Warp > 35 Weft > 25
Prestalene	65% Polyester 35% Viscose	>147	200	Plain	Warp > 650 Weft > 650	Warp > 20 Weft > 20
Orion	65% Polyester 35% Viscose	>147	220	Plain	Warp > 1000 Weft > 800	Warp > 35 Weft > 30
Navy Gaberdine	65% Polyester 35% Viscose	>147	270	Twill	Warp > 1500 Weft > 750	Warp > 40 Weft > 40

\*All the images within our brochure have been obtained from the public domain Google images.

## Head Office & Sales - Sydney

9 Power Avenue,  
Alexandria  
NSW 2015  
Australia

tel: +61 2 9366 3300  
fax: +61 2 9366 3380

## Sales - Melbourne

1E Marine Parade,  
Abbotsford  
VIC 3067  
Australia

tel: +61 3 9418 1200  
fax: +61 3 9418 1288

## Manufacturing Mill

Sisely Avenue,  
Wangaratta  
VIC 3677  
Australia

