



**Bruck**  
Textiles

# Structural

Performance - Comfort - Integrity - Durability



Bruck Textiles

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

# The BRUCK Structural outer shell range minimum performance data:

Property	Method	Performance
Residual Strength After exposure to radiant heat	ISO 13934-1 ISO 6942 Method A 3 Minutes @ 10 kW/m <sup>2</sup>	≥ 450 N
Abrasion Resistance	ISO 12947-2 @ 12 kPa	≥ 20,000 cycles
Flame Spread - Surface Ignition	ISO 15025 Procedure A	No hole formation No molten or flaming debris Average afterflame ≤ 2s Average afterglow ≤ 2s
Flame Spread - Edge Ignition	ISO 15025 Procedure B	Char length ≤ 100mm No molten or flaming debris Average afterflame ≤ 2s
Heat Resistance	ISO 17493 5 minutes @ 260°C	No melt No drip No ignition Shrinkage ≤ 5%
Dimensional Change	ISO 5077	≤ 3% warp and weft
Surface Wetting	ISO 4920	≥ 4
Penetration By Chemicals <sup>1</sup>	AS/NZS ISO 6530 40% NaOH at 20°C 36% HCl at 20°C 37% H <sub>2</sub> SO <sub>4</sub> at 20°C O-xylene 100% at 20°C	> 80% run off
BRUCK Structural fabrics meet the requirements of AS/NZS 4967		

All results after pretreatment according to ISO 6330:2000 Wash Procedure 5A, Dry Procedure E; 5 Cleaning Cycles.

<sup>1</sup> Tested in assembly.

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Fabric	Composition	Weight [g/m <sup>2</sup> ]	Weave	Tensile Strength ISO 13934-1 [N]	Tear Strength ISO 4674-1 Method B [N]
ENFORCER® 24K with PBI®	40% PBI®/ 60% Kevlar®	205	3-Dimensional	warp > 1500 weft > 1500	warp > 160 weft > 160
ENFORCER® PBI Matrix®	40% PBI® 60% Kevlar® p-Aramid matrix	205	Plain	warp > 1400 weft > 1500	warp > 90 weft > 90
ENFORCER® PBI Gold®	40% PBI®/ 60% Kevlar	220	Twill Rip-resist	warp > 1800 weft > 1650	warp > 100 weft > 110
FORTRESS® 3GPlus	78% Nomex® IIIA 22% Kevlar®	195	3-Dimensional	warp > 1000 weft > 740	warp > 100 weft > 115
FORTRESS® 3D	Nomex® IIIA	220	3-Dimensional	warp > 900 weft > 1100	warp > 55 weft > 115
FORTRESS® 260	Nomex® IIIA	260	Twill Rip-resist	warp > 1800 weft > 1000	warp > 130 weft > 130
FORTRESS® 205	Nomex® IIIA	205	Twill Rip-resist	warp > 1300 weft > 750	warp > 70 weft > 60



# Structural

Protection - Comfort - Breathability - Durability



BRUCK engineered solutions for Structural Firefighting are much more than just fabrics - they're systems. The overall performance of your turnout gear is the sum of each individual layer. For this reason, we are continually evolving fabrics whose high performance properties can be synergised from the inner most lining, through the thermal and moisture barriers, to the outer shell.

Tough, durable and dependable systems are extremely important, as is how your gear feels against the skin and moves with your body. BRUCK fabrics are developed to last and feel good to wear. Our systems minimise weight and maximise breathability, thereby minimising metabolic heat stress, while you remain protected from flame, radiant heat, and chemical splash. BRUCK products are proven tough to withstand the challenges of Structural Firefighting.

BRUCK partners with the global leaders in inherent flame retardant fibre technology and high quality yarn producers to bring you the ENFORCER® and FORTRESS® collection of outer shells and the INSUL-TEX® range of thermal liners and scrims.

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