

TENCATE
Gemini™
with MATRIX® technology

EMERGENCY RESPONSE



Excellent Performance & Protection

TenCate Gemini™ combines the proven performance of Pbi with advanced engineering expertise of TenCate. The thermal resistance of Pbi and Kevlar® spun yarns reinforced with an enhanced Matrix™ technology filament grid to provide the high performance you need when it counts most.

- **Advanced engineering** – Gemini™ features a patented high tech grid of composite filament & spun yarns and Matrix™ technology that provides strength, reduces abrasion and eliminates puckering.
- **Superior durability** – 5-7 times better abrasion resistance than competitive Pbi fabrics.
- **Excellent thermal protection** – Strong and flexible before and after thermal exposure.
- **Peak Performance System™** – Gemini is a component of the TenCate Peak Performance System.

TenCate Gemini delivers peace of mind when lives are on the line.
Nothing Beats a TenCate Protective Fabric.

Natural (Gold)

FIBER BLEND: 60% Kevlar® fiber
40% Pbi reinforced with
Kevlar® filament networks
WEIGHT (± 5%): 7.5 oz (sq yd)
WEAVE: Modified plain
COLORS: Natural (Gold), Black
FINISH: Super Shelltite™
END USE: Turnout Gear Outer Shells

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PHYSICAL PROPERTIES	TenCate Gemini™	NFPA 1971 Requirements
Trapezoidal Tear Strength (lbs) ASTM D 5587* Initial (warp x fill) After 5 launderings (warp x fill)	45 x 45 35 x 35	22.0 min
Tensile Strength (lbs) ASTM D 5034 Initial (warp x fill) After 10 launderings (warp x fill)	290 x 260 230 x 220	140.0 min
Tensile Strength (lbs) after 17.5-second TPP Exposure (2.0 cal/cm²•sec) (warp x fill)	75 x 50	
Water Absorption Resistance (%) AATCC 42 Initial After 5 launderings	< 1.0 < 10.0	30.0 max
Flame Resistance ASTM D 6413 Char Length in inches (warp x fill) (Initial) Char Length in inches (warp x fill) (After 5 launderings) After Flame in seconds (warp x fill)	0.2 x 0.2 0.2 x 0.2 0.0 x 0.0	4.0 max 2.0 max
Laundry Shrinkage (%) AATCC 135 After 5 launderings (cotton sturdy cycle) (warp x fill)	< 3.5 x < 2.5	5.0 max
Heat and Thermal Shrinkage (%) NFPA 1971 500°F for 5 minutes After 5 launderings	< 1.5 < 2.0	10.0 max

*NFPA 1971-2007 specifies Trapezoidal Tear Strength measurement according to ASTM D5587 not allowing for specimen slippage.



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Sunlight/UV Exposure Advisory: Prolonged sunlight and UV exposure can be damaging to aramid and Pbi fibers. Both natural (undyed) and dyed aramid and Pbi fibers will fade or change color with exposure to sunlight or other UV sources. The thermal performance is not affected, but long term or repeated exposures will cause the fabric to gradually weaken. Garments should be stored so that they are protected from sunlight, including windows and bay doors, to maximize wear life. TenCate Protective Fabrics offers no warranties, implied or otherwise, for color change or fabric damage due to UV exposure.

To the best of our knowledge, the information contained herein is accurate. However, TenCate Protective Fabrics assumes no liability whatsoever for the accuracy or completeness of the information contained herein. Users of any substance must satisfy themselves by independent investigation that the material can be used safely. We have described certain hazards, but we cannot guarantee that these are the only hazards.

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Finishing and Non-woven are ISO-9001 Certified Facilities.

3/2010 Gemini 940.4571 without sample / 940.4572 with sample