



Advance ultra®



More than 11 times the strength of Omni 45™. Protection plus durability means real value.

Engineered with an innovative triple fiber blend, TenCate Advance Ultra® offers an exceptional combination of strength, durability, and thermal protection. The stronger the outer shell is after thermal exposure, the more protection it provides because breakopen is less likely to occur.

To test the strength of outer shell fabrics, manufacturers expose the fabric to a heat source, then measure the Breaking Force/Tensile Strength after thermal exposure.

TENSILE STRENGTH AFTER TPP EXPOSURE

Outer Shell Fabrics After a 17.5 Second TPP Exposure



Advance Ultra versus Omni 45™

Shown above are the tensile strength values of Advance Ultra® vs. Omni 45™ after a 17.5 second TPP exposure (2 cal/cm²). As you can see, Advance Ultra has more than 11 times the tensile strength of Omni 45, showing superior thermal protection.

Taber Abrasion tests also prove that Advance Ultra is significantly more durable, meaning longer wear life and greater value.

TABER ABRASION PERFORMANCE After Taber Abrasion Test

5 TIMES THE RESISTANCE!

Advance Ultra®
4,000 cycles



Omni 45™
750 cycles



Light Gold

FIBER BLEND: 60% Kevlar®
20% Nomex®
20% PBO

WEIGHT: 7.5 oz (sq yd)

WEAVE: Rip-Stop

COLOR: Light Gold, Yellow,
Dark Gold

FINISH: Super Shelltite™

END USE: Turnout Gear Outer Shells

THERMAL PROTECTIVE PERFORMANCE

Outer Shells with Caldura® and PTFE Moisture Barrier



TENSILE STRENGTH AFTER 10 LAUNDERINGS

Tensile Strength of Weakest Fabric Direction After 10 Standardized Laundering



TENSILE STRENGTH AFTER ACCELERATED LIGHT EXPOSURE

Tensile Strength of Weakest Fabric Direction After 80 Hours Xenon Exposure



TEAR STRENGTH AFTER TPP EXPOSURE

Outer Shell Fabrics After a 17.5 Second TPP Exposure



PHYSICAL PROPERTIES	TenCate Advance Ultra®	NFPA 1971 Requirements
Trapezoidal Tear Strength (lbs) ASTM D 5587* Initial (warp x fill) After 5 launderings (warp x fill)	45 x 45 40 x 35	22.0 min
Tensile Strength (lbs) ASTM D 5034 Initial (warp x fill) After 10 launderings (warp x fill)	440 x 420 320 x 310	140.0 min
Tensile Strength (lbs) after 17.5-second TPP Exposure (2.0 cal/cm ² • sec) (warp x fill)	110 x 100	
Water Absorption Resistance (%) AATCC 42 Initial After 5 launderings	< 1.0 < 2.5	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)	0.1 x 0.1 0.1 x 0.1 0.0 x 0.0	4.0 max 2.0 max
Laundry Shrinkage (%) AATCC 135 After 5 launderings (cotton sturdy cycle) (warp x fill)	< 5.0 x < 5.0	5.0 max
Heat and Thermal Shrinkage (%) NFPA 1971 500°F for 5 minutes After 5 launderings	< 1.0 < 1.0	10.0 max

*NFPA 1971-2007 specifies Trapezoidal Tear Strength measurement according to ASTM D 5587 not allowing for specimen slippage.

Exceptional thermal protection – Strong and flexible before and after thermal exposure.

Superior abrasion resistance – Resists abrasion, holes and tears.

Outstanding value – Offers reliable, long lasting, and durable protection at an affordable price.

TenCate Advance Ultra® delivers peace of mind when lives are on the line.