

● Light Blue ● Spruce ● Red ● Orange ● Tan ● Yellow ● Black ● Natural ● Dark Navy ● Fire Service Navy ● Royal Blue

PHYSICAL PROPERTIES

Weight (+ or - 5%) oz (sq yd) grams (sq meter)	4.5 oz (sq yd) 153g (sq meter)	6.0 oz (sq yd) 203g (sq meter)	ASTM F 1891 Requirements	NFPA 2112 Requirements
Weave	Plain	Plain		
Standard Colors (other colors available upon request)	● ● ● ● ● ●	● ● ● ● ● ●		
Thickness (inches)	0.020	0.020		
Construction (warp [w] x fill [f])	66 x 43	67 x 44		
Vertical Flammability ASTM 6413-99 After 100x Launderings Char Length (inches [w x f]) After Flame (seconds [w x f])	2.8 x 2.8 0.0 x 0.0	2.4 x 2.4 0.0 x 0.0	4.0 max. 2.0 max.	4.0 max. 2.0 max.
Thermal Protective Performance (cal/cm²) NFPA 1971	10.0 4.5	12.0 6.0	6.0 min. (w/ spacer) 3.0 min. (no spacer)	6.0 min. (w/ spacer) 3.0 min. (no spacer)
Flash Fire Exposure (Manikin Test) ASTM F1930 (% body burn [2.0 cal/cm² • sec] at 3 seconds)	pass	pass	50.0 max.	50.0 max.
ARC Thermal Performance ATPV (cal/cm²) ASTM 1959 After Flame @ 10 cal (seconds)	4.6 - 4.8 < 1.0	5.7 - 5.9 < 1.0		
Tensile Strength (lbs [w x f]) ASTM 5034	170 x 100	240 x 150		
Elmendorf Tear Strength (lbs [w x f]) ASTM 1424	10 x 7	12 x 8		
Dimensional Stability (% [5x]) 120°F AATCC 135 140°F Industrial Wash, 160°F Max Stack Dry [5x]	≤ 3.0	≤ 3.0		
Air Permeability (ft³/ft²/minutes) ASTM 737	210	80		
Washing Colorfastness 140°F Industrial Wash, 160°F Max Stack Dry [25x]	*4 *4	*4 *4		
Colorfastness to Xenon Light (20 hours) AATCC 16	*3-4	*3-4		
Crocking AATCC 8 Wet	*3-4 - All Colors	*3-4 - All Colors		
Dry	*5 - All Colors	*5 - All Colors		
Wicking (distance in seconds) (1" strip, tap water)	0.5 inches 1.0 inches 1.5 inches 2.0 inches	3 10 27 58		
Theoretical Moisture Regain (%)	4.5	4.5		
Pilling Resistance ASTM 3512	30 minutes 60 minutes 90 minutes 120 minutes	*4 *5 *5 *5	*4 *5 *5 *5	
Heat Resistance (500°F, 5 minutes) After 100 Industrial Launderings	pass	pass	shall not melt, drip, separate or ignite	shall not melt, drip, separate or ignite
Thermal Shrinkage Resistance (%[500°F, 5 minutes]) After 100 Industrial Launderings	< 2.0	< 2.0	10.0 maximum	10.0 maximum
Appearance of Fabric AATCC 124 After 50 Home Launderings	*4	*4		

Ratings: *5 - Best, *3 - Acceptable, *1 - Poor



LAUNDERING: Garments made with FREESTYLE™ SOFT fabrics are easily maintained by home or industrial laundering. For detailed laundering specifications, please contact TENCATE at (800) 241-8630.

SUNLIGHT/UV EXPOSURE ADVISORY: Prolonged sunlight and UV exposure can be damaging to aramid and PBO fibers. Both natural (undyed) and dyed aramid and PBO 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. SOUTHERN MILLS, Inc. OFFERS NO WARRANTIES, IMPLIED OR OTHERWISE, FOR COLOR CHANGE OR FABRIC DAMAGE DUE TO UV EXPOSURE.

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