

Property	Test method	125 GSM	165 GSM	285 GSM
Heat and Flame Protection EN ISO 11612				
Tensile Strength (MD x CD)	ISO 13934-1	195 N x 185 N	270 N x 210 N	550 N x 460 N
Tear strength (MD x CD)	ISO 13937-2	9 N x 9 N	15 N x 15 N	30 N x 30 N
Dimensional Change (MD x CD)	ISO 5077	<±3	<±3	<±3
Heat Shrinkage (180°C)	ISO 17493	N/A	-1% x -2%	-1% x -1%
Limited Flame Spread (A1) (Initial) Index	15025	No flaming to top or side edge, No hole formation, No debris Index 3	No flaming to top or side edge, No hole formation, No debris Index 3	No flaming to top or side edge, No hole formation, No debris Index 3
Afterflame		0 s	0 s	0 s
Afterglow		0 s	0 s	0 s
Convective Heat*	EN 367	B1 (5 s*)	B1 (6 s*)	B1 (8 s*)
Radiant Heat*	ISO 6942	C1 (14 s*)	C1 (17 s*)	C1 (18 s*)
Molten Metal Splash (Iron)*	ISO 9185	N/A	N/A	E1
Contact Temperature	ISO 12127	N/A	N/A	F1
Welders' Protection EN ISO 11611				
Tensile Strength (MD x CD)	ISO 13934-1	195 N x 185 N	270 N x 210 N	550 N x 460 N
Tear strength (MD x CD)	ISO 13937-2	9 N x 9 N	15 N x 15 N	30 N x 30 N
Dimensional Change (MD x CD)	ISO 5077	<±3	<±3	<±3
Limited Flame Spread (A1) Index	15025	No flaming to top or side edge, No hole formation, No debris Index 3	No flaming to top or side edge, No hole formation, No debris Index 3	No flaming to top or side edge, No hole formation, No debris Index 3
Afterflame		0 s	0 s	0 s
Afterglow		0 s	0 s	0 s
Impact of Spatter	ISO 9150	N/A	N/A	18 drops
Radiant Heat	ISO 6942	14 s*	17 s*	18 s*
Electrical Resistance (Transversal)	EN 1149-2	N/A	N/A	attained
Arc Flash Protection				
Arc Flash (Box test)	EN 61482-1-2	N/A	Class 1 (single layer) Class 2 (double layer)	Class 2 (single layer)
Arc Flash (Open test) ATPV	EN 61482-1-1	9,5	11	33
Heat Attenuation Factort		N/A	83 %	93 %
Other Results				
Breathability (Ret)	EN 31092	Being tested	Being tested	Being tested
Air Permeability (l/dm ² /min)	ISO 9237	537*	328*	143*
Thickness (mm)	ISO 9073-2	1,03*	1,11*	1,48*
Elongation (MD X CD)	ISO 9073-3	21% x 28%	17% x 28%	16% x 27%

* After 5 domestic washing cycles at 60°C. All statements and data are given for informal purposes only and do not constitute a specification.

Performance Engineered Fabrics for Protective Clothing

End-Uses

- Industrial FR Workwear
- Arc Flash Protective Clothing
- FR liners

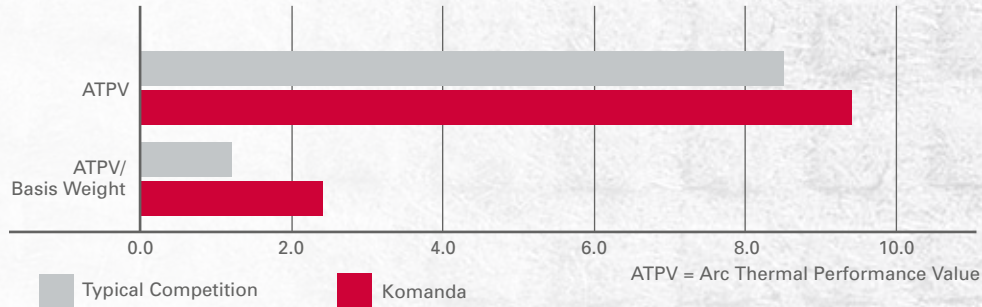
Performance Characteristics

- Lightweight FR material
 - Strong FR protection for multi-layer and single-layer solutions
- Protects against Heat & Flame acc. to EN 11612
- EN IEC 61482-1-2 in single layer:
 - Class 1 below 165 gsm
 - Class 2 below 300 gsm
- Durability to washing
- Soft and drapeable
- Superior breathability
- Various colours available
- Protection for Welders acc. to EN 11611
- Chemically resistant, high-visibility, antistatic product options available



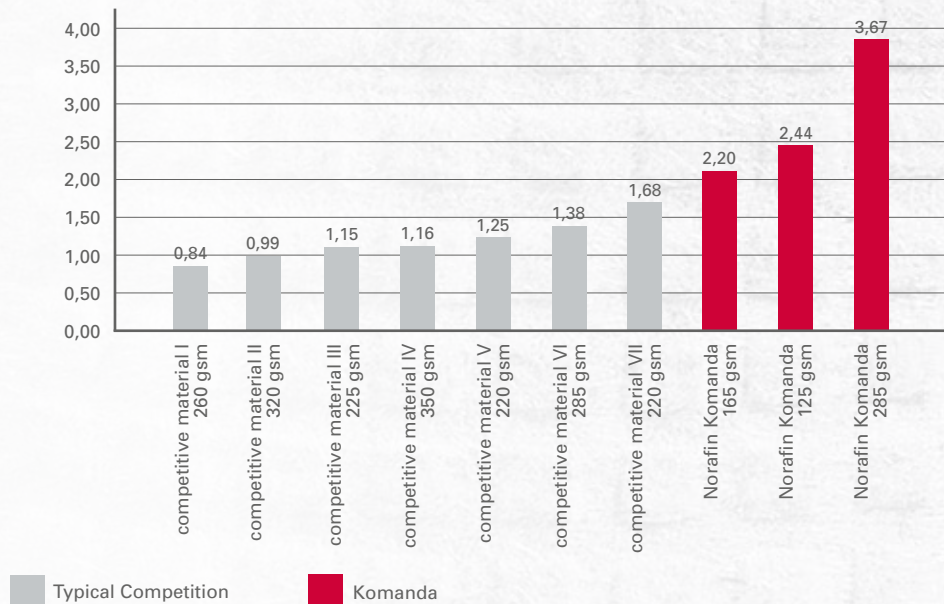


- Significantly increased arc protection performance compared to leading competitive materials.
 - Equivalent (or improved) performance at approximately 45 % lower basis weights.
 - **Tested materials: Komanda: 125 gsm, Typical Competition: 240 gsm**



- Performance improvements are even greater at higher basis weights

Arc Flash Performance Comparison
 ATPV / Basis Weight (cal/sq.cm)/oz/sqy



Wash Durability

Above industry standard wash durability – the materials have been subjected to extended home and industrial wash durability testing

- Under **domestic laundry** conditions, Komanda has been successfully laundered through **> 100 wash cycles**
- Even in the much more severe **industrial laundering** method, Komanda has been successfully laundered through **100 cycles**