

# MADEIRA

## Technical Datasheet

06.06.2016

### Fire Fighter No. 40 Fire Fighter Bobbin Thread No. 40

Article Description	Flame resistant embroidery and bobbin thread
Composition	100% Aramid
Count	130 dtex x 2 / 120 den x 2
Make Up Available	25g spool (approx. 950m) and 2500m Cone 5000m cone

#### Fastness Rating – Scale 1 (worst) – 5 (best)

Fastness to washing at 60°C	DIN EN ISO 105-C04/M & S C4A	4-5
Fastness to water (damp for 4hrs at 37°C)	DIN EN ISO 105-E01/M & S C6	4-5
Fastness to rubbing dry (10 rubs on dry white Fabric)	DIN EN ISO 105-X12/M & S C8	4
Fastness to rubbing wet (10 rubs on wet white Fabric)	DIN EN ISO 105-X12/M & S C8	3-4
Fastness to dry cleaning	DIN EN ISO 105-D01	4-5
Fastness to bleaching with Hypochlorite	DIN EN ISO 105-N01	4-5

#### Fastness Rating – Scale 1 (worst) – 8 (best)

Fastness to light (100hrs xenon light)	DIN EN ISO 105-B02	2-3
Change of color due to influence of heat cannot be excluded.		

#### Mechanical – Technological Values

Tensile Strength cN (force until thread breaks, in Centinewton)	DIN EN ISO 2062	ca. 680
Elongation (% of stretch extension with weight tension until breaks)		ca.22
Shrinkage (shrinkage at boiling water)	DIN 53866 T2	<1 %

#### Recommendations for care



Color Card No.

96

Öko-Tex:



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### The relevant test Standards a.) for protective clothing b.) for flame spread

Property Limited flame spread ISO 15025 method A: 10s surface ignition EN ISO 6330:2000, method 6N+F (former 2A+E)	Dim.	Test data Flame impingement on different positions of the embroidery	
		New	After 5 washing cycles
<b>Limited flame spread</b> - further flaming to top or sides - hole formation - flaming, melting debris - afterflame time - afterglow time	    s s	    no no no	    no no no 0 0

Due to the high temperature resistance the yarn can be used for embroidery applications on all kinds of protective clothing. The current standards for EN ISO 11612 (EN 531), EN 469, EN 14460, CLC/TS Cl. I 50354, etc. can be achieved with these embroidery applications without problem, provided the remainder of the protective clothing is manufactured from appropriate materials.

### Physical properties

Temperature resistance for long-term application:	< 175°C
Change in condition by long-term application:	> 200°C
Softening point:	none
Melting point:	none
Flash point:	self-extinguishing
Decomposition temperature:	> 420 °C
Self-igniting temperature:	no ignition
Burning behavior:	no burning

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