

# Technical Data Sheet

To DIN EN ISO, Marks & Spencer Standards

Jan. 2007

Article Name	<b>Fire Fighter No.40 Fire Fighter Bobbin Thread No. 40</b>
Article Description	Flame resistant embroidery/Bobbin thread
Composition	100% Aramid
Harmonised Tariff Number	550810100
Count	130 dtex x 2 120 den x 2
Make Up Available Embroidery Thread	25 g spool (approx. 950 m)
Make Up Available Bobbin Thread	5000 m cone

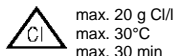



### Fastness Rating – Scale 1 (worst) – 5 (best)

Fastness to washing at 95°C DIN EN 20105 / 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 / M & S C10A	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	approx. 680
Elongation (% of stretch extension with weight tension until breaks) DIN EN ISO 2062	approx. 22
Shrinkage (shrinkage at boiling water) DIN 53866 T2	< 1 %
Recommendations for care	   
Color Card No.	95

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

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

Due to the high temperature resistance the yarn can be used for embroidery applications on all kinds of protective clothing. The current test standards for protective clothing - 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.