

MADEIRA

Technical Datasheet

07.10.2020

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 | 950m spool and 2500m Cone 5000m cone (Underthread) |
| Recommended needle size | 75/11 – 80/12 |

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.680cN |
| 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.

97

Oeko-Tex



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

| Property-Fabric Limited flame spread ISO 15025:2002 method A surface ignition, flaming time 10s, direct ignition of the embroidery in direction of use with reduced amount of samples n=3 in each condition | Dim. | Test data Flame impingement on different positions of the embroidery | |
|---|------|---|------------------------|
| | | New | After 5 washing cycles |
| Limited flame spread | | | |
| - 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 standards for DIN EN ISO 11612 A,B & C, DIN EN 469, DIN EN ISO14460 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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