



Coats Protos Fil

FIRE RETARDANT
CONTINUOUS
FILAMENT
PARA-ARAMID

Product Information

Coats Protos Fil is a fire retardant sewing thread made from 100% Kevlar® or para-aramid continuous filament. This thread offers thermal resistance and protective seam durability in applications exposed to high external heat.

Para aramid filament is very difficult to dye, but Coats has developed a unique and innovative dyeing process to offer Coats Protos Fil in a range of colours suitable for the mattress industry. It has excellent heat and age resistance and retains its strength at flame temperatures exceeding 400°C. Coats Protos Fil meets both American Fed 16 CFR 1633 Mattress Burn Test and Military AA 55220 specification requirements.

Coats Protos Fil is made from continuous filament para-aramid filament yarn. A special coating is applied to the fibre in order to maximize sewing performance even in the most exacting operations. Coats Protos Fil is the recommended thread for mattress tape edge seams.



Main Uses:

- Mattress tape edge seam
- Ripcords
- Hose binders
- Military applications
- Insulation

Why choose Protos Fil?

- Delivers a higher margin of mattress burn test safety because of higher para-aramid filament tenacity.
- Retains adequate strength even after heat ageing up to 400°C for 30 minutes.
- Unique monocord cross section available in lightly bonded version.
- Special para-aramid colours available.
- Excellent sewing and exceptional seam integrity.
- High strength and low elongation for ripcords.
- Meets Coats restricted substance list.

Technical Services

Our team of experts deliver innovative solutions globally.





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Tex	Ticket	Ply	Strength cN	Elongation % Min - Max	Needle Size Metric
40	70	1	6665	3 - 5	80 - 90
60	50	3	10190	3 - 5	90 - 100
80	35	2	13330	3 - 5	110 - 130
90	30	2	18000	3 - 5	120 - 140
105	25	1	19990	3 - 5	120 - 140
120	24	1	22540	3 - 5	130 - 160
135	20	3	27000	3 - 5	130 - 160
150	18	1	31165	3 - 5	130 - 180
210	13	1	42140	3 - 5	180 - 250
350	9	3	60075	3 - 5	230 - 300

Thermal Properties:

- Decomposes at 450°C (840°F)

Chemical Properties:

- Excellent resistance to oils and petro chemicals
- Excellent chemical resistance

Fastness Properties:

- Wash fastness (95°C): ISO 105 C04 (DIN 54011) Grade 3
- Rub fastness: ISO 105 X12 (DIN 54021) Grade 3



Since conditions and applications vary considerably in the use of a product, the customer and/or user should assure herself or himself that the product meets end customer requirements and is suitable for the intended end use. Coats accepts no liability for unsuitable or improper use or application of products.

Information provided above is based on current averages and should be taken only as indicative. Coats accepts no liability for the preciseness and correctness of the information provided.

Product information sheets are updated from time to time, please be sure you are referring to the most recent publication. Coats supports customers with advice on individual applications on request; if you have any questions or concerns, please contact us.

