

COATS
protos fil



FIRE RETARDANT
CONTINUOUS
FILAMENT
PARA-ARAMID

Coats® Protos Fil™

Coats Protos Fil is a fire retardant sewing thread made from 100% para-aramid continuous filament. This thread offers excellent 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 Protos Fil in a range of colours suitable for the mattress industry. Protos Fil meets both American Fed 16 CFR 1633 Mattress Burn Test and Military AA 55220 specification requirements. A special coating is applied to the fibre in order to maximise sewing performance even in the most exacting operations. Coats Protos Fil is the recommended thread for mattress tape edge seams.

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

MAIN USES

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



Coats Protos Fil

PRODUCT RANGE

TEX	Ticket	Dtex/Ply	Strength cN	Elongation % Min - Max
90	30	222x4	13345	3
80	40	400x2	13790	3
90	30	440x2	18000	3
135	20	440x3	27000	3
40	75	444x1	6665	3
90	30	444x1	6140	3
135	20	444x3	20260	3
90	30	920x4	49800	3
350	10	1100x3	50400	3
150	20	1667x1	25800	3
500	6	1667x3	84000	3
700	5	1667x4	95000	3
150	20	1670x1	28000	3
210	15	2044x1	15570	3
210	15	2100x2	64000	3

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



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Since conditions and applications vary considerably in the use of a product, the customer and/or user should assure themselves 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 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 for 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. © Copyright reserved 2021



Coats Protos Fil

EXPERT REAL WORLD SUPPORT

The final cost of any thread also includes hidden costs, fuelled by the methods and tools applied to it. Our experts know exactly how to reduce those costs, save time and increase productivity.



One to One Visits

There's no need to come to us, our experts will travel to your site. In person, online or via the phone, our trained consultants deal with the kind of issues any busy factory may face, providing a solution for today and a blueprint for future efficiency.



Training and Presentations

From thread selection to stitch formation, the use of colour to solutions for common production issues, we take the learning gathered through years of hands on experience and present it in the form of high impact seminars, workshops and presentations.



Innovation Hub

Collaborate directly with expert R&D technologists at our Innovation Hub to create pioneering and tailored solutions for products ranging from Performance Materials to Apparel and Footwear. Equipped with state-of-the-art technology, we quickly turn ideas into prototype designs ready for manufacturing.

To drive your hidden costs down, talk to Coats. From product audits in pre-production to the latest technical bulletins, we'll provide support that achieves measurable results.

For more information, talk to your Coats representative today or visit [coats.com](https://www.coats.com)

OTHER PRODUCTS IN THE PROTOS RANGE

To complement the Protos range, we also have a selection of specialist Protos threads. Each of these combines the superior properties of the Protos product with additional benefits specific to the end use.

Product Name	Description
Protos Binder	This slow-shrink, para-aramid yarn is designed to withstand high stranding speeds and makes an excellent dual-end binder in loose tube cables.
Protos	This high strength, high modulus fire retardant sewing thread is made from 100% staple spun para-aramid, offering exceptionally high strength retention even at elevated heat ageing temperatures.
Protos Ripcord PF	Para-aramid yarn that is engineered with a special twisting technology that improves its grip and offers easier cable ripping.
Protos Steel	Para-aramid wrapped steel core yarn that can withstand temperatures up to 1000°C, making it ideal for textile products that are exposed to high heat.

Special use Protos products are typically available across a select range of ticket sizes and technical information will in some cases vary from the above table.



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