

Coats® Gral Plus

Coats Gral Plus is a high elongation continuous filament polyester thread with excellent abrasion resistance property. This thread is for structural seam with special quality requirements of highly stretchable activewear, athleisure.

COATS
gral plus



CONTINUOUS
FILAMENT POLYESTER

WHY CHOOSE GRAL PLUS?

- Excellent softness for chafing free comfort wear
- Super abrasion resistance for durable seam
- Wonderful elongation property to guarantee high seam stretch ability and good recovery after stretched
- Uniform thread size and hairiness free to assure good seam appearance
- Yellowing free
- Good washing performance
- STANDARD 100 by OEKO-TEX® CLASS I

MAIN USES

- All functional garments
- Structural seam with high stitch density
- All stitch operations



Coats Gral Plus

PRODUCT RANGE

Article Ticket	Ticket	Tex	Length	Average Strength cN	Elongation % Min - Max	Recommended Needle Size Metric
13P3120	120	21	3,000M	1,150	40 - 50	75 - 90
13P2120	120	21	2,000M	1,200	40 - 50	75 - 90
13P2080	080	35	2,000M	2,000	40 - 50	75 - 90
13P2060	060	40	2,000M	2,400	40 - 50	90 - 100

CHEMICAL PROPERTIES

Mineral acids:	Resistant to most mineral acids
Alkalis	Essentially unaffected by weak alkalis, but less resistant to stronger alkalis, especially at higher temperatures
Organic solvents	Generally unaffected, but soluble in some phenolic compounds
Bleaching	Unaffected
Insects / microorganisms (mildew, rot)	Unaffected
Moisture regain	0.4%

FASTNESS PROPERTIES

Wash Fastness 60°C	ISO 105-C10C	Grade 4
Water Fastness	ISO 105-E01	Grade 4
Hypochlorite Fastness	ISO 105-N01	Grade 4
Dry Cleaning Fastness	ISO 105-D01	Grade 4
Perspiration Fastness	ISO 105-E04	Grade 4
Artificial Light Fastness	ISO 105-B02	Grade 4

These fastness grades represent minimum performance levels and, in practice, the majority of shades will exceed these levels.



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 2022



Coats Gral Plus

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.



Seamworks

Install our Seamworks software to accurately calculate costs prior to production, putting an end to the risk of over or under ordering materials, and incurring unnecessary extra costs. The Seamworks tool is provided with installation, training and ongoing support included.



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.



Embroidery Service Centre

Our Embroidery Service Centre makes embroidering a design much easier, increasing productivity at the same time as enhancing the design itself. Email the design and any problematic issues to us and our technicians will email the improved design right back.



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 thread 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 www.coats.com/gral-plus

OTHER PRODUCTS IN THE GRAL RANGE

To complement the Gral range, we also have a selection of specialist Gral threads. Each of these have additional benefits specific to the end use.

Product Name	Description
Gral EcoVerde	100% recycled pre-stabilised high tenacity continuous filament polyester
Gral	Lubricated continuous filament polyester for neat and attractive stitching
Gral AS	Minimises the attraction of down towards the needle, helping to prevent down leakage through needle holes
Gral AWF	Free of perfluorinated compounds (PFCs), best anti-wick thread choice for no-compromise, premium water-resistant outdoor wear and rainwear
Gral Multicolour	An attractive and varied multicoloured continuous filament polyester sewing thread for eye-catching stitching
Gral AST Anti-static	Features a metallic conductive component which detracts electrical charge to prevent static build-up.

Special use Gral 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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