

COATS
gral as



CONTINUOUS
FILAMENT
POLYESTER

Coats® Gral AS™

In drier atmospheric conditions the lower static and lower dynamic friction values of Gral AS minimise the attraction of down towards the needle, helping to prevent down leakage through needle holes. The lower dynamic friction values of Gral AS also enhances the uniformity of the stitch formation providing neat, well balanced seams. The reduced frictional values also allow smoother thread pull off through the sewing machine helping to deliver longer lasting seams.

WHY CHOOSE GRAL AS?

- Creates a smoother, softer handle to the sewn seam when compared with conventional sewing threads
- Allows lower tension settings, improving the stitch balance and providing neater and flatter seams
- Excellent static and dynamic friction values reduce leakage of "down" through the needle hole
- Provides solutions for oil-sensitive materials such as CO fabrics
- Allows for improved sewing performance on complex materials due to its higher heat shield
- Provides outstanding sewability
- The reduced frictional values allow smoother thread pull off through the sewing machine helping to deliver longer lasting seams

MAIN USES:

- Activewear
- Outdoor wear
- Jackets

PRODUCT RANGE

Art / Tkt	Tex	Ticket	Length	Strength cN	Elongation % Min - Max	Needle Size Metric
13SK 200	12	200	3000m	920	16 - 22	65 - 75
13SK 120	21	120	3000m	1420	16 - 22	75 - 90
13SG 080	35	80	2000m	2170	16 - 22	75 - 90

* in EMEA markets please contact your local Coats office should you require thread samples of Gral AS in Tkt 200, 120, 080.



Coats Gral AS

THERMAL PROPERTIES

Melts at 250 - 260°C, softens at 220 - 240°C

Shrinkage less than 2.5% @ 150°C

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
Laundering / dry cleaning:	Unaffected
Moisture regain:	0.4%

FASTNESS PROPERTIES

Washing at 60°C	(ISO 105 C10:2006 C(3))	Grade 4
Water Fastness	(ISO 105 E01:2010)	Grade 4
Rub Fastness	(ISO 105 X12:2001)	Grade 4
Hypochlorite Fastness	(ISO 105 N01:1993)	Grade 4
Dry Cleaning Fastness	(ISO 105 D01:2010)	Grade 4
Perspiration Fastness	(ISO 105 E04:2009)	Grade 4
Artificial Light Fastness	(ISO 105 B02:1994)	Grade 4

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 2019



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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.

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-as

OTHER PRODUCTS IN THE GRAL RANGE

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

Product Name	Description
Gral (Coarse Sizes)	High tenacity sewing thread with excellent abrasion resistance, ideal for sewing leather footwear.
Gral for Apparel	Lubricated continuous filament polyester for neat and attractive stitching.
Gral AST Anti-static	Features a metallic conductive component which detracts electrical charge to prevent static build-up.
Gral AWF (Apparel Sizes)	Free of perfluorinated compounds (PFCs), best anti-wick thread choice for no-compromise, premium water-resistant outdoor wear and rainwear.
Gral AWF (Coarse Sizes)	Free of perfluorinated compounds (PFCs), best anti-wick thread for no-compromise, water-resistant outdoor footwear and accessories.
Gral Multicolour	An attractive and varied multicoloured continuous filament polyester sewing thread for eye-catching stitching.
Gral Protect	Sewing thread treated to give the finished thread anti-microbial / anti-fungal properties.

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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