

COATS  
gral awf



100%  
POLYESTER

# Coats® Gral AWF™ (Coarse Sizes)

Coats Gral AWF for coarse sizes delivers near water-resistant and abrasion-resistant seams, making it an excellent choice for outdoor footwear and accessories. It has a high strength-to-fineness ratio and has been specially lubricated to give a smooth, refined look. The lubrication also helps it to perform well during sewing.

Our Gral AWF is made from a 100% polyester continuous filament thread. Its PFC-free, anti-wick finish is kinder to the environment and helps prevent water travelling through the seam.

## WHY CHOOSE GRAL AWF (COARSE SIZES)?:

- Gral AWF is a 100% polyester continuous filament thread
- Its high breaking strength and optimum stretch characteristics produce smooth and attractive seams on leather footwear
- The PFC-free anti-wick finish inhibits the capillary effect, thereby ensuring that no water is taken up by the thread
- When the correct sewing tension is used, the transport of water through the needle hole is prevented

## MAIN USES:

- Backpacks
- Leather goods
- Protective footwear
- Safety shoes
- Soft luggage
- Sports footwear
- Walking boots

## PRODUCT RANGE

Art / Tkt	TEX	Ticket	Length	Strength cN	Elongation % Min - Max	Needle Size Metric
F429 060	40	60	4000m	2620	16 - 22	90 - 100
F322 040	60	40	3000m	4230	17 - 22	100 - 110
F322 030	80	30	3000m	5200	17 - 22	130 - 140
F322 020	135	20	3000m	8360	18 - 24	140 - 160
F320 015	180	15	1000m	11400	22 - 30	140 - 160
F320 010	270	10	1000m	16630	20 - 34	160 - 200



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## 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
Laundrying / 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 technological bulletins, we'll provide support that achieves measurable results.

For more information, talk to your Coats representative today or visit [www.coats.com/gral-awf-coarse](http://www.coats.com/gral-awf-coarse)

## 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
<b>Gral (Coarse Sizes)</b>	High tenacity sewing thread with excellent abrasion resistance, ideal for sewing leather footwear.
<b>Gral AS</b>	Engineered for use as needle thread to prevent down migration during the sewing and lifetime of padded down jackets.
<b>Gral AST Anti-static</b>	Features a metallic conductive component which detracts electrical charge to prevent static build-up.
<b>Gral AWF (Apparel Sizes)</b>	Free of perfluorinated compounds (PFCs), best anti-wick thread choice for no-compromise, premium water-resistant outdoor wear and rainwear.
<b>Gral for Apparel</b>	Lubricated continuous filament polyester for neat and attractive stitching.
<b>Gral Multicolour</b>	An attractive and varied multicoloured continuous filament polyester sewing thread for eye-catching stitching.
<b>Gral Protect</b>	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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