



PERFORMANCE WEAR

# ABOUT COATS

We are global leaders in the design and supply of industrial threads, zips, engineered yarns and trims. Our comprehensive range of products are designed to deliver customers' desired strength and performance characteristics and are supported by a suite of value added services to help customers improve efficiency and solve problems. As an innovator and pioneer, Coats is the first choice for manufacturers of high quality textiles.

## PERFORMANCE WEAR

- Performance Wear covers a wide variety of garments ranging from protective clothing and workwear to uniforms and gloves. These garments are expected to perform in differing, demanding conditions like heat plus other end use applications including bullet-proof requirements, arc resistance and cut resistance.
- Innovative materials made from meta-aramids, para-aramids or blends, provide final garments improved functionality and durability coupled with better comfort and, in some cases, a sense of fashion.
- Coats comprehensive and cost-effective range of threads, engineered yarns and zips, trims and tapes for performance wear meet important industry norms and standards as well as deliver consistent superior quality and value - globally.



	Heat & Flame Protection EN 469 Fire Fighters, NFPA 1971, NFPA 1975, NFPA 1977	Heat & Flame Protection EN ISO 1611 Welding, NFPA 2112	Heat & Flame Protection EN ISO 11612 Industrial Heat and Flame	Heat & Flame Protection EN ISO 14116 Industrial Heat and Flame	Electro Static Protection EN 1149	Chemical: Acid Protection	Chemical: Alkali Protection	Clean Room Protection: Silicone Free	Cut & Abrasion Protection	Foul Weather Protection	Workwear / Uniforms	Electric ARC Protection NFPA 70E, EN 470, EN 149-1, EN 61340	US Military Specifications
<b>For Protective Clothing</b>													
Coats Pyrostar	★	★	★	★									
Coats Firefly	★	★	★	★									★
Coats Flamepro												★	
Coats Flame Master	★	★	★	★									★
Coats Protos Plus	★								★				★
Coats Protos Fil	★								★				
Coats Protos Steel	★								★				
Coats Helios*	★		★	★					★				
Coats Helios K	★								★				★
Coats Aptan							★						
Coats Epic SIF (antislip)								★					
Coats Gral AW (anti-wick)										★			
Coats Gral AST (anti-static)					★								
<b>For Workwear / Uniforms</b>													
Coats Dual Duty											★		★
Coats Epic						★					★		★
Coats Astra						★					★		

\*Helios sewing thread is suitable for use in heat and flame protective clothing according to EN 469, EN ISO 11612 and EN ISO 14116. It is not suitable for use in electrician and welder protective clothing due to the relatively low vertical resistance (< 105 Ω) the material cannot keep down the possibility of electrical shock by contact with live electric conductors.



# COATS PERFORMANCE WEAR

## FOR PROTECTIVE CLOTHING

Flame, heat or splashes of molten metal or chemicals – when working under extreme conditions Coats threads, engineered yarns and zips provide maximum protection – made to protect.



### Coats Pyrostar

- 100% longstaple spun m-aramid, specially finished
- Outstanding heat and flame protection, up to 370°C
- EN 469, EN ISO 11611, EN ISO 11612 and ISO EN 14116 approved
- Wide range of colours
- Excellent strength, durability and seam appearance
- Specified for fire fighter uniforms, public authority garments and flame retardant embroidery

### Coats Firefly

- 100% spun m-aramid
- Outstanding heat and flame protection, up to 370°C
- EN469, EN ISO 11611, EN ISO 11612, EN ISO 14116 NFPA 1971, 1975, 1977, 2112 approved
- Wide range of colours
- Excellent sewability and seam integrity
- Specified fire fighters clothing, work wear uniforms and army combat suits
- US Military Spec AA55217

### Coats Flame Master

- Polyester coespun with polyester wrap
- Excellent permanent flame protection
- EN 469, EN ISO 11611, EN ISO 11612 and ISO EN 14116 approved
- Most extensive shade range
- Superior sewability
- Recommended for firefighters, welders, industrial workers, military and public order personnel

### Coats Protos Plus and Protos Fil

- Coats Protos Plus: longstaple spun p-aramid
- Coats Protos fil: continuous filament p-aramid
- Outstanding strength for protective apparel providing optimum cut and puncture resistance
- Ideal for fire fighter wear, safety shoes, gloves and bullet proof vests
- High temperature limit up to 400°C
- Coats Protos Plus: US Military Spec AA55195
- Coats Protos fil: US Military Spec AA55220

### Coats Protos Steel

- Constructed with a special steel core and a para-aramid wrap
- High temperature limit up to 1000°C
- Outstanding strength
- Ideal for welding blankets, fire curtains, heat and flame protective carpets and industrial heat and flame protective clothing

### Coats Flamepro

- Innovative family of flame resistant electric arc and cut resistance yarns
- Large selection of fibres
- Ability to blend multiple fibres

### Coats Helios

- Steel wires wrapped with a flame retardant cotton cover
- High temperature limit up to 600°C without any mechanical strain
- EN 469, EN ISO 11612 and EN ISO 14116 approved
- Provides good sewing performance

### Coats Helios K

- Steel wires wrapped with a p-aramid cover
- High temperature limit up to 1000°C without any mechanical strain
- Outstanding strength
- Ideal for welding blankets and curtains, Insulation jackets and Industrial heat & flame protective clothing

### Coats Aptan

- 100% continuous filament nylon 6,6
- Excellent high speed sewing
- Excellent abrasion resistance

### Coats Epic SIF (antislil)

- Polyester coespun with polyester wrap
- Silicone free
- For use in seams where silicone is undesirable, e.g. paint spray coveralls

### Coats Gral AW (anti-wick)

- Made from continuous filament polyester with an anti-wick finish
- Specially designed to prevent wicking of water through needle holes and along the thread by capillary action
- High degree of water resistance
- Recommended for use in seams where water repellency is called for

### Coats Gral AST (anti-static)

- Made from continuous filament polyester in combination with a conducting material
- Specially designed to prevent static build-up in garments, footwear etc.
- Highly recommended for garments for electronic assembly line staff

# COATS OPTI ZIPS

- Opti M Firefly - flame retardant zip made up of 100% meta-aramid tape and metal elements. This zip gives outstanding permanent heat and flame protection up to 370°C. Opti M Firefly meta-aramid metal zips are tested and certified according to standards EN ISO 15025:2002, EN 469, EN ISO 11611, EN ISO 11612 and ISO EN 14116. They meet most of our customers' requirements for 20 washes as per BS 5651:1989 and also meet standards DIN 3416, 3418, 3419 and BSI 3084.
- Opti S Flame Master and Opti M Flame Master – textile tapes based on special molecular modified polyester, rendering permanent flame retardant properties.

# COATS SIGNAL

## Reflective and Flame Resistant Tapes and Heat Transfer Films

- Coat Signal RD cotton is a flame resistant silver retro reflective tape for all types of flame resistant high visibility applications.
- Coats Signal RD aramid is a premium flame resistant retro reflective tape designed for maximum heat and flame protection and tough industrial laundry conditions.
- Coats Signal RD lime-silver-lime/orange-silver-orange are flame resistant aramid based reflective tapes that have combined retro reflective and fluorescent elements for maximum visibility at night time and during daytime and low light conditions.

# COATS CONNECT

## Hook and Loop

- Coats Connect RD hook and loop fasteners are produced from 100% polyamide with flame resistant properties. They are designed for a broad range of industrial applications where flame protection is required and meet the requirements of key flammability standards.



# COATS PERFORMANCE WEAR

## FOR WORKWEAR / UNIFORMS

Frequent and repeated industrial washing and the daily stress of performing under punishing conditions – you need Coats threads and zips – **made to work.**



### Coats Dual Duty

- Polyester corespun with cotton wrap
- Delivers excellent sewing performance in the most demanding applications
- High tenacity polyester filament core allows the use of finer thread sizes improving seam appearance without compromising seam strength
- Outstanding abrasion resistance for demanding workwear applications

### Coats Epic

- Polyester corespun with polyester wrap sewing thread
- Ensures excellent stitch formation and good looking seam appearance
- Finished with a specially formulated lubricant delivering excellent sewing performance at low tension under the most demanding of conditions
- Stronger, more durable, with a high strength core which allows use of finer threads and needles without compromising strength compared to staple spun threads
- Excellent colour fastness performance level

### Coats Astra

- Meets the highest environmental and safety standards and is 100% staplespun polyester
- Makes durable, long-lasting seams which look good throughout the sewn product lifetime
- Dependable sewing performance where cost matters
- High level of colour fastness

# Technical Data -

## North America, Canada, Mexico, Dominican Republic

Coats Threads and Engineered yarns for Performance Wear	Description	Tex. No.	Ticket No.	Average Strength (cN)	Elongation (%) Max	Recommended Needle Size (Singer)
Coats Firefly	Staple spun meta-aramid	24	120	699	16-32	10-12
		27	110	735	16-32	11-14
		40	75	1285	25-37	12-14
		60	50	1936	25-37	14-18
		80	40	2601	25-37	16-19
		90	35	2998	25-37	18-22
Coats Protos	Staple spun para-aramid	45	70	5058	5	12-14
		60	50	4800	5	14-18
		80	40	5957	5	16-19
		90	35	7246	5	18-22
		105	30	8971	5	19-23
Coats Protos Fil	Continuous filament para-aramid	90	35	15625	5	19-22
		135	20	20893	5	21-23
		350	9	49058	5	26-29
Coats Protos Steel	Special steel core and para-aramid wrap	90	30	8500	6	120-140
Coats Helios C	Steel wires wrapped with a flame retardant cotton cover	210	13	2700	16	130-160
Coats Helios K	Steel wires wrapped with a para-aramid cover	210	13	6000	10	130-160
Coats Flamepro	Family of flame resistant, electric arc and cut resistant yarns	Offered in various fibres, blends and counts. Contact <a href="mailto:marketing@coats.com">marketing@coats.com</a> for more information				

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.

# Technical Data - Europe, Asia, Middle East

Coats Threads and Engineered yarns for Performance Wear	Description	Tex. No.	Ticket No.	Article Code	Length (m)*	Average Strength (cN)	Elongation (%) Max	Recommended Needle Size (metric)
Coats Pyrostar	Long staple spun meta-aramid	135	20	SAD3020	1000	5800	17-27	130-160
		70	40	SAD5040	2500	2750	17-27	100-120
		40	70	SAD1070	5000	1600	16-26	90-100
Coats Firefly	Staple spun meta-aramid	70	40	9600040	2500	2300	17-27	100-120
		40	70	9700070	5000	1500	17-27	90-110
		30	100	9700100	5000	1000	15-25	80-90
Coats Flame Master	Polyester covered core-spun permanent flame protection	70	40	2392040	2500	3040	18-25	100-120
		40	70	2395070	5000	1960	18-24	90-100
Coats Protos Plus	Longstaple spun para-aramid	80	35	SAE1035	3000	10600	3-5	110-130
		60	50	SAE5050	3000	8000	3-5	100-110
		40	70	SAE8070	5000	4900	3-5	90-100
Coats Protos Fil	Continuous filament para-aramid	135	20	SAE6020	2000	27000	3-5	130-160
		90	30	SAE7030	2500	18000	3-5	120-140
Coats Protos Steel	Special steel core and a para-aramid wrap	90	30	SZOK030	2000	8500	4-6	120-140
Coats Helios	Steel wires wrapped with a flame retardant cotton cover	210	13	0900013	2000	2700	8-18	130-160
		150	18	0900018	2000	2100	15-25	120-140
Coats Helios K	Steel wires wrapped with a para-aramid cover	210	13	0639013	2000	6000	6-10	130-160
Coats Aptan	Continuous filament nylon	70	40	S054040	3000	4700	16-29	100-120
		45	60	S064060	6000	3210	18-32	90-100
		35	80	S066080	6000	2160	18-32	75-90
Coats Epic SIF	Polyester covered corespun free of silicone	40	80	3045080	20000	1960	18-24	80-100
		30	100	3047100	50000	1490	17-22	80-90
Coats Gral AW	Continuous filament polyester thread with a water repellent finish	60	40	1420040	1000	4230	17-22	100-110
		40	60	1420060	1000	2620	16-22	90-100
		35	80	1420080	1000	2170	16-22	90-110
Coats Gral AST	Continuous filament polyester in combination with a conductive material	135	20	S2A2020	830 g	7030	18-25	120-140
		80	35	3450030	600 g	5700	15-26	110-130
		35	80	S2A4080	4000	1800	15-26	80-100
Coats Dual Duty	Polyester corespun with cotton wrap	60	50	1569050	5000	2840	18-24	100-120
		40	75	1569075	5000	1860	18-24	90-100
		24	120	1569120	5000	1040	18-22	75-90
Coats Epic	Polyester covered corespun	60	50	2994050	5000	3040	18-25	100-120
		40	80	2994080	5000	1960	18-24	75-90
		30	100	2994100	5000	1490	17-22	75-90
		24	120	2994120	5000	1190	17-22	70-90
		21	150	2994150	5000	980	17-22	65-75
Coats Astra	Staple spun polyester	40	80	8754080	5000	1410	13-20	75-90
		27	120	8754120	5000	990	13-20	75-90

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