

FILTRATION BROCHURE



NOVEMBER 2022

WWW.COATS.COM

CONNECTING. PIONEERING. TRUSTED.

INTRODUCTION TO COATS

Our worldwide success story

As the world's leading industrial thread designer, maker and marketer, the world is our home, with a global 17,000-strong workforce.

We provide threads and yarns that are at the heart of the apparel and footwear industries. We develop innovative high-tech materials for high-impact industries such as Transportation, Telecommunications, Energy, Oil & Gas, and Personal Protection. And we never stop innovating.

Our dedicated teams in our three global Innovation Hubs in Europe, Asia and North America are developing technology and advances that have the potential to revolutionise the world.

Nowhere is this more vital than in sustainability. Together with our partners we innovate to address some of the planet's most serious problems. And we are determined to reach net-zero emissions by 2050.





ABOUT COATS

Coats is the world's leading industrial thread company. At home in some 50 countries, Coats has a workforce of 17,000 people across six continents. Revenues in 2020 were US\$1.2bn.

Coats' pioneering history and innovative culture ensure the company leads the way around the world. It provides complementary and value added products, services and software solutions to the apparel and footwear industries. It applies advanced solutions to develop a wide variety of high-performance yarns, threads, fabrics, and other materials for relevant and challenging areas such as Transportation, Telecommunications, Energy, Oil & Gas, and Personal Protection.

Headquartered in the UK, Coats is a FTSE 250 company, a Member of the FTSE4Good Index Series, a participant in the UN Global Compact and a member of the Ellen MacArthur Foundation. It has also committed to developing a long-term target to reach net-zero emissions by 2050, the highest level of ambition on climate under the Science Based Target Initiative.

WHAT IS FILTRATION?

Filtration is the separating of substances based on their different physical and chemical properties using a filter medium.

In our daily life we apply the process of filtration in many ways. As few examples are:

- Heating, ventilation and air conditioning (HVAC) systems. At work, in the workplace and in shops, air filtration is used to remove particles as well as odors and chemicals.
- Our cars contain filters for the fuel, air (both for the engine and the passengers)
- The water we drink is almost certainly filtered to remove particles, chemicals, heavy metals.
- Every time a vacuum cleaner runs, it passes a stream of dust-filled air through a filtering bag in the machine.
- Many aquariums use filters containing fibres that capture particulates.





FILTRATION INDUSTRIES

- Food and Beverage
- Automotive
- Chemical and Medicine
- Wood
- Metal
- Mining
- Mineral
- Energy
- Wastewater

DRY VS WET FILTRATION

The filtration market is segmented into two categories: dry filtration and wet filtration.

Dry filtration means a filter fabric is used as a medium to collect particles such as dust, smoke, fumes, etc. to keep them from being emitted into the atmosphere wet filtration is used to removing liquids from solids, chemicals, dysetuff, etc.

DRY FILTRATION TYPES

Air filtration

Air filtration is the technology used most widely to remove particles from an air stream due to its relative ease and flexibility. Both fabric and fibrous filters are used for airborne particle control. Fabric filters are made from woven and felted fabrics that collect particles primarily on their surface. They are frequently used in the form of bags that are hung within a large housing. Fibrous filters, used more frequently in workplace applications, are a nonwoven mat of individual fibers oriented randomly perpendicular to the airflow.

Dry food grade filtration

Effective air filtration is needed to protect food production processes from germs and viruses.

Hot gas filtration

Hot gas filters can be advantageously used in many industrial processes. Downstream equipment, such as catalyst units, heat exchangers, turbines, and scrubbers can be protected from erosion, fouling, and pollution.



WET FILTRATION TYPES

Liquid filtration

Liquid filters are used to separate suspended solids from a fluid stream. These are commonly found in food and beverage manufacturing, bioprocessing, pharmaceutical and medical industries, and wastewater treatment.

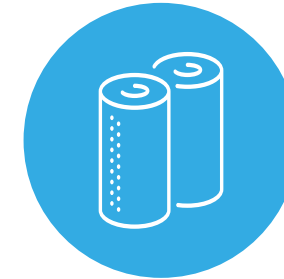
Wet Food grade filtration

Membrane technology is used in the food and beverage industry to separate, concentrate, and clarify liquids.





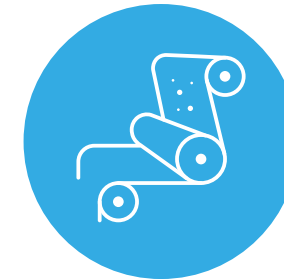
FILTER TYPES



Filter Cartridge



Filter Bag



Belt Filter



Filter Pocket

COATS FILTRATION OFFER

Coats delivers the right thread for stitching filter bags, filter cartridges, belt filter and filter pockets for every possible filtration application with a range that features threads for use in acid, alkali, solvent or heat resistant applications.

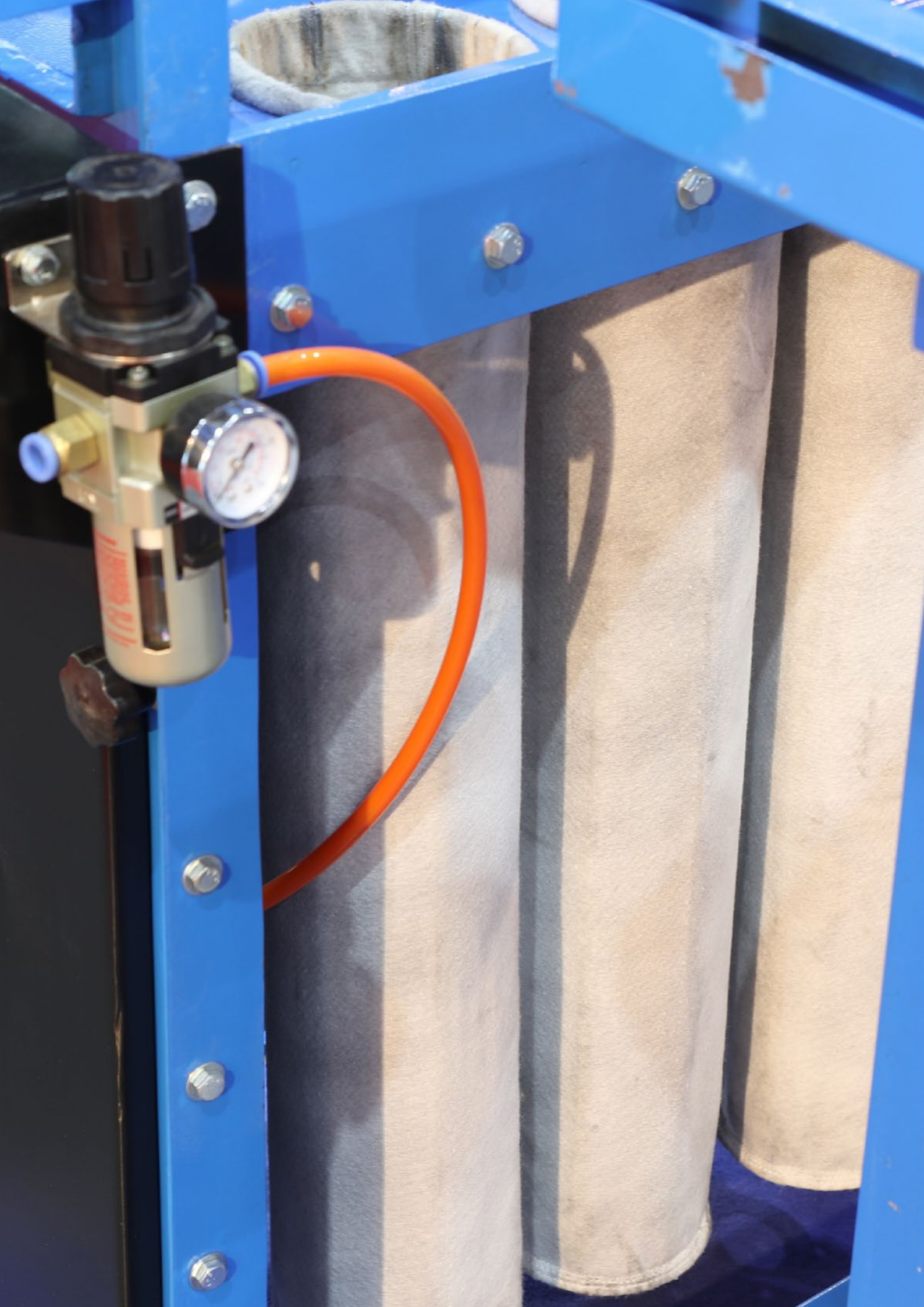
Dedicated to different filtration segments, including dry and wet filtration, we offer a wide range of products. We also offer specially engineered threads for enhanced tear and abrasion resistance, in addition to creating customer-specific constructions.

FILTRATION SUBSTRATES

Filtration Substrates	Heat resistance permanently (°C)	Heat resistance	Acid resistance	Alkali resistance	Resistance to oxidants	Resistance to solvents	Tear resistance
Polyester	150	175	★★★★	★★	★★★★	★★★	★★★★★
Recycled Polyester & Silicone Free	150	175	★★★★	★★	★★★★	★★★	★★★★★
Polypropylene	90	100	★★★★★	★★★★★	★★★	★★★★★	★★★★
Homopolymeric Polyacrylonitrile	125	140	★★★★	★★★★	★★★	★★★	★★★
Meta-Aramid	180	320	★★	★★★	★★★	★★★★	★★★★
Polytetrafluorethylene (PTFE)	260	280	★★★★★	★★★★★	★★★★★	★★★★★	★★★
Fibre Glass / PTFE	260	345	★★★★	★★★★	★★★★	★★★★	★★★★
Polypropylene	90	100	★★★★★	★★★★★	-	-	-
Polyvinylidene Fluoride	130	130	★★★★★	★★★★★	-	-	-

★★★★★ Excellent ★★★★ Good ★★★ Satisfactory ★★ Moderate ★ Poor





PRODUCT OFFER

		Ticket	Tex	Construction	Strength	Length
Coats Dolanit	Homopolymeric polyacrylonitrile	30	105	350 x 3	3000	12 - 17
Coats Pyrostar	Spun m-aramid, specially finished	20	135	500 x 3	5800	17 - 27
		40	70	250 x 3	2750	17 - 27
		70	40	135 x 3	1600	16 - 26
Coats Firefly	Spun m-aramid	40	70	250 x 3	3000	17 - 27
		70	40	170 x 3	1500	17 - 27
Coats Epic SIF Ecoverde	Recycled polyester corespun, specially finished	80	40	205 x 2	1965	18 - 24
		100	30	152 x 2	1490	17 - 26
Coats Gral SIF Ecoverde	Recycled continuous filament polyester specially finished	40	70	244 x 3	4448	15 - 25
		40	70	226 x 3	4230	17 - 22
		65	45	244 x 2	3277	15 - 25
Coats Prolene Thread	Continuous filament polypropylene	6	500	1670 x 3	15984	30 - 40
		8	300	1100 x 3	17765	20 - 32
		12	210	1100 x 2	13333	15 - 27
		20	135	235 x 6	6956	27 - 39
		30	90	235 x 4	5782	20 - 32
		35	90	330 x 3	4275	20 - 34
		40	60	220 x 3	3800	20 - 32
		40	70	235 x 3	4448	15 - 27
Coats Helios	Ultra High Molecular Weight Polyethylene	20	120	440 x 3	30100	4 - 7
		40	70	250 x 3	15000	4 - 7
	Steel core with para aramid	13	210	2100 x 1	6000	6 - 10
		30	90	1000 x 1	8890	4 - 6
	Steel core with flame retardant cotton	13	210	2100 x 1	2700	8 - 18
		18	150	1600 x 1	2100	15 - 25
		24	120	310 x 6	2500	7 - 10
	Polytetrafluoroethylene	20	135	450 x 3	4300	6-10
Coats Glasmo	Fibre glass, PTFE coated Top Thread	21	120*	150/2 x 2	7950	1 - 5
		18	180*	150/2 x 3	12092	1 - 5
		30	200**	300-2/2 x 3	14192	1 - 5
		12	240	150/2 x 4	14748	1 - 5
	Fibre glass, PTFE coated Cocoons	18	180	150/2 x 3	12092	1 - 5
		30	200	300-2/2 x 3	14192	1 - 5
Opti PP Opti PVDF	Zip fasteners	Available in a wide range of sizes and finishes. Please ask your Coats representative for further information				

PROLENE FILTRATION

YARN TYPES

Agion	<ul style="list-style-type: none">• Anti-microbial Polypropylene fibre
FDA	<ul style="list-style-type: none">• Approved for food contact
Ryton	<ul style="list-style-type: none">• Polymers containing Polyphenylene Sulfide (for high temperatures of 200°C and chemical resistance)• Non oxidizing, good for high PH applications even at elevated temperatures• Chemically resistant with many acids, salt solutions and automotive fluids• Max temp 425°F/ XXX °C• Similar to bleached cotton, but with more coarse fibre and less absorbency features
Rayon	<ul style="list-style-type: none">• Smooth similar to cotton• Meets FDA standards for distilled water, beverages, vegetable oils, petroleum, fatty acids, and alcohols
Filbrillated Polyester	<ul style="list-style-type: none">• Discontinuous longitudinal cuts (low moisture absorption)• Great abrasion resistance• Economical• Good for liquids and electronics• Used in fine sediments (sand, ect)• Helps with adhesion
Bleached Cotton	<ul style="list-style-type: none">• Meets FDA standards for distilled water, beverages, vegetable oils, petroleum, fatty acids, and alcohols
Combo	<ul style="list-style-type: none">• 2 ends of bleached cotton and 2 ends of natural cotton• Bleached outer and natural core combined (bleaching removes the oil in the fibres)• Meets FDA requirements for the potable liquids, vegetable oils, beverages, organic solvents, water, dilute acids, petroleum oils• Has 1 more end of cotton than Industrial Combo
Industrial Combo	<ul style="list-style-type: none">• 3 ends of natural and 1 end of bleached cotton• 1 less end of cotton than the regular combo
String wound	<ul style="list-style-type: none">• Over a core – creates zig/zag path• Holds more dirt

Product Code	Description	Construction	Count Hk/lb	Ply	Skein Break lbs
PR30375	.63/1 NATURAL COTTON	Dref	.63/1	1	85
PR30325	.63/1 FDA BLEACH COTTON	Dref	.63/1	1	150
PR30321	.63/1 COMBO BLEACHED COTTON	Dref	.63/1	1	160
PR30319	.63/1 INDUSTRIAL COMBO COTTON	Dref	.63/1	1	130
PR30327	.60/1 NYLON	Dref	.60/1	1	140
PR30340	.63/1 RAYON	Dref	.63/1	1	175
PR30365	.55/1 POLYESTER	Dref	.55/1	1	250
PR30305	.63/1 FDA PP	Dref	.63/1	1	200
PR30315	.63/1 ECO POLYPROPYLENE	Dref	.63/1	1	220
PR30308	.63/1 FDA POLY AGION ANTI MICROBIAL	Dref	.63/1	1	200





GLASMO

Developed for the manufacturing of demanding filtration applications, it is a temperature resistant fibreglass sewing thread with exceptional thermal stability. Ideal for filtration media where chemical resistance is one of primary criteria. Unique sintering technology for low strength loss & Excellent cake release. Glasmo QT is a Quartz sewing thread made from high purity, continuous filament pure fused silica with a maximum operating temperature of 2000°F/1094°C.



HELIOS P

The strongest polytetrafluoroethylene (PTFE) sewing thread on the market. Superior chemical resistance which makes it ideal for filtration media. Excellent heat resistance up to 260°C that is suitable for dust filter bags which operate at higher gas stream temperature.



DOLANIT

A staple spun sewing thread made from homopolymeric polyacrylonitrile, best qualified for use in wet and dry filtration, i.e. for sewing filter bags and filter tubes. Mainly used in cases where polyester is not suitable due to high moisture conditions.



EPIC ECOVERDE SIF

Recycled polyester corespun thread, finished with silicone free lubricant that is manufactured in a controlled and separate environment. Silicone pollution is major problem in paint spraying application. It can cause blisters and loss of adhesion. Silicone free finish is the perfect choice for filtration needs within the automotive industry.





PYROSTAR

100% long staple spun meta-aramid sewing thread that offers outstanding, permanent heat and flame protection. High temperature resistance up to 370 °C which makes it ideal for smoke filtration.



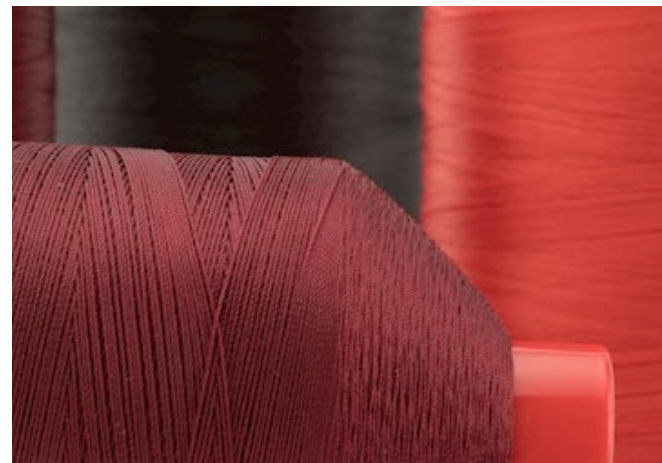
FIREFLY

100% meta-aramid, offering outstanding protection against heat and flame up to 371°C.



GRAL ECOVERDE SIF

Recycled continuous filament polyester thread, finished with silicone free lubricant, in a controlled and separate environment. Silicone pollution is major problem in paint spraying application. It can cause blisters and loss of adhesion. Silicone free finish is ideal to sew filters used in wet filtration of car paints.



PROLENE

Continuous filament polypropylene sewing thread that provides excellent resistance to acids, alkalis and solvents. Offering excellent chemical resistance makes it ideal for big bag manufactures. It conforms to FDA (Food and Drug Administration) standards.





CONTACT US

For more information visit
www.coats.com