Coats® Signal™ Reflective Threads

COATS Signal™ Recycled — RECYCLED CONTINUOUS FILAMENT NYLON/GLASS

COATS Signal™ Soft — CONTINUOUS FILAMENT NYLON / GLASS

Coats Signal Recycled and Coats Signal Soft are two high-tech retro-reflective sewing and embroidery thread products for fashion applications in apparel sewing. When illuminated by a light source, they help to enhance the visibility at night-time or in difficult weather conditions and add that extra special decorative feature. They are specially developed threads with an extraordinary high level of retro-reflectance coupled with good sewability and softness.

Coats Reflective threads are ideal for fashion applications.
They are not to be used for safety wear where strict norms for reflectivity values are specified.

2025

Why choose Coats Signal™ Reflective Threads?

- Lubricated finish for needle heat protection and smooth sewing
- The daytime colour is silver and when illuminated by light the reflected colour is white
- Enhanced retro-reflectivity visibility when illuminated by a light source
- 3D reflective stitching effect
- OEKO-TEX® STANDARD 100, Product Class II

Main Uses:

- Decorative sewing and embroidery
- Fashion and apparel applications

> **For Footwear / Heavy-Duty applications, please refer to Signal HD product information**

Product Range

Product Name	Article Ticket	Ticket	Tex	Length	Average Strength cN	Elongation % Min - Max	Thermal Properties Melting Point °C
Signal Recycled	ECS5040	40	80	500M	1,000	17 - 27	210 - 220
Signal Soft	SEV5040	40	70	500M	1,090	15 - 25	250 - 260
Signal Soft	SEV5030	30	120	500M	4,000	10 - 25	250 - 260

Chemical Properties

Mineral acids	Decomposed by strong mineral acids but resistant to weak acids
Alkalis	Essentially unaffected by weak alkalis, but less resistant to stronger alkalis, especially at higher temperatures
Organic solvents	Generally unaffected
Bleaching	Unaffected, deterioration dependant on conditions
Insects / microorganisms (mildew, rot)	Unaffected
Moisture regain	Approximately 4.5%

The resistance to any particular chemical will depend on the individual circumstances.

Technical advice should be sought from your nearest Coats unit if the application involves chemical treatment.

Areas of Application

Embroidery

Signal Recycled ESC5040 and Signal Soft Tkt 40; SEV5040 can be used with care for embroidery. Recommended needle size 90 / 14R. The embroidery design needs to be adjusted with less stitches because the thread size is coarser than regular embroidery thread. Reduce the machine speed to 50% of normal running speed.

Top Cover in Flatseam

Signal Recycled ESC5040 and Signal Soft Tkt 40; SEV5040 can be used with care as top cover thread in flatseam ISO 602 / 605 / 607 to give a decorative 3D reflective appearance. As the reflective thread can cause higher abrasion of machine parts, be sure to regularly check the loopers on the machine and replace them when worn or with any sharp edges. Reduce the machine speed to 50% of normal running speed.

Lockstitch

Coats Signal Soft Tkt 30; SEV5030 can be used with care, for decorative lockstitch applications as an embellishment. Recommended needle size 120 / 18. As the reflective thread can cause higher abrasion of machine parts, be sure to regularly check and replace the needle when the needle hole is worn or with any sharp edges. Combine with a Coats EcoVerde Epic in the bobbin. Coats Signal Soft Tkt 30 is not suitable for construction seams and is not suitable for use as bobbin thread. Reduce the machine speed to 50% of normal running speed.

*Needle size recommendations are a guide only and ultimately depend on the sewing application and fabric material.

Product Limitations

The reflectivity of Coats Signal Reflective Threads is generated by tiny glass beads that are bonded onto the surface of the reflective tape. Per definition, glass as a material is much harder than metal. During sewing and embroidery, the glass beads cause higher abrasion of the needle and looper parts of the sewing machine. Despite the best bonding technology, the glass beads can come off the thread during the sewing process.

It is therefore very important that:

- Sewing operators are instructed in the use of the reflective thread
- Sewing machines are cleaned regularly with compressed air
- Needles and loopers are checked regularly and replaced when worn
- Sewing machine speed is decreased to 50% of normal running speed
- The needle size recommendation is followed

Digitised embroidery designs are typically suitable for regular embroidery thread size, e.g. Tex 27. Coats Signal Reflective Threads are much coarser (Tex 70 / Tex 80) and the embroidery design needs to be adjusted with less stitches.

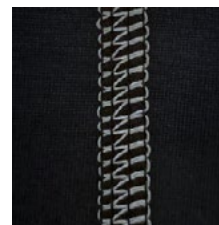The recommended stitch density for Coats Signal Reflective Threads is 0,55mm - 0,65mm.

Please contact your local Coats office for technical support.

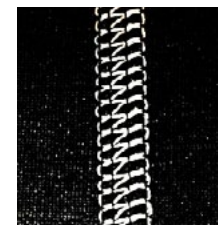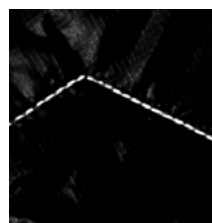| Application	Stitches per minute
Embroidery	500 - 700
Lockstitch	550 - 1000
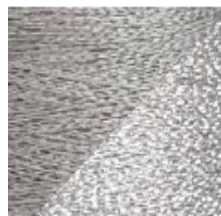
Effect	Normal light	Flash light

Example of Lockstitch Stitching

Textile Care

To drive your hidden costs down, talk to Coats. From product 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**