

# AntiStat



## Perlon® – The Filament Company

Perlon® – The Filament Company – is an innovative, global group of companies specialized in the manufacture of synthetic filaments. Perlon® generates annual sales of more than 150 million euros, employs about 850 people and has a production capacity of 23,000 tons. We operate from locations in Germany, Poland, in the USA and in China.

Through our technical expertise and strength in innovation we develop premium quality products for our customers. The comprehensive product portfolio is based on a variety of raw materials. In line with the intended application, these are modified and processed into high quality, application-specific filaments. The consistent high quality of our products sets worldwide benchmarks.

## AntiStat protects from sparks

AntiStat is a polyester-based bi-component monofilament with antistatic properties. It is used in woven or spiral process belts in various industries. Primary applications are forming fabrics for the production of Nonwoven and dryer fabrics for particle board or wood pellets.

AntiStat dissipates electrostatic charges, thereby improving the process stability and reducing explosion hazards in line with the ATEX Directive (explosive atmospheres). It can also be used as for dielectric shielding of high voltage cables.

## Technical data

- Bi-component with perfect core/sheath adhesion
- Thermo-mechanical properties matching PET
- Available in diameters from 0.30 – 2.50 mm
- 4 different shrinkage levels
- Volume resistivity  $\leq 250 \Omega \times \text{cm}$
- HPS (high pressure shower) / hydrolysis resistant grades available
- Fulfils the requirements of ATEX Directive

## Areas of application

- Wherever dissipation of electrostatic charges is needed
- Process and conveyor belts
- Nonwoven forming fabrics
- Dryer for particle board and wood pellets
- Di-electric shielding of high voltage cables
- Grades for woven fabrics and spiral fabrics available

## Characteristics of AntiStat

AntiStat is a core/sheath bi-component monofilament. The core consists of polyester and the sheath is made of a polyester based polymer filled with carbon black (see Fig. 1). The two polymers are co-extruded which ensures an excellent core-sheath adhesion (see Fig. 2) and prevents the release of carbon black particles during fabric manufacturing and – most importantly – in the end application. The electrostatic conductivity of AntiStat outperforms other polyester based conductive monofilaments available on the market. AntiStat can be woven or coiled into spiral fabrics (see Fig. 3).

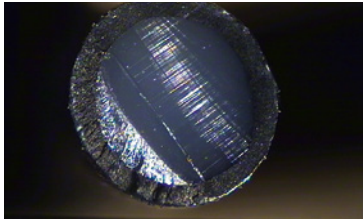


Fig. 1:  
Cross section of AntiStat

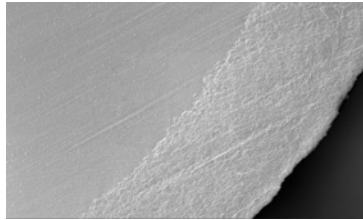


Fig. 2:  
Core-sheath transition zone



Fig. 3:  
Spiral made from AntiStat

## Characteristics of process belts containing AntiStat

Process belts usually combine conductive and standard polyester monofilaments in warp and weft directions. The relative amount of AntiStat versus standard polyester monofilament is determined in order to achieve the desired electrostatic dissipation. As the thermomechanical characteristics of AntiStat perfectly match those of QualiFil polyester monofilaments, the belts (see Fig. 4) or spiral sieves (see Fig. 5) produced thereof exhibit a smooth topography unlike fabrics using polyamide based conductive monofilaments. This reduces the risk of marking and carbon black particle release upon friction against static machine parts.

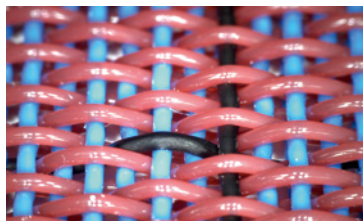


Fig. 4:  
PET woven fabric incorporating  
AntiStat in warp and weft

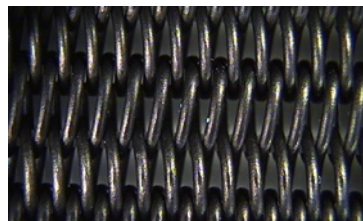


Fig. 5:  
Spiral fabrics from 100% AntiStat

## Special grades for demanding applications

Special grades designed to meet specific requirements are also available:

AntiStat LH grade can withstands pressure of 200 bars and is therefore appropriate for applications requiring resistance to cleaning devices operating at high pressure.

AntiStat LC grade with enhanced hydrolysis resistance is recommended for dryer fabrics operating at high temperatures in humid conditions.

**Brand related products:** 7<sup>\*\*</sup>LC, LH, LS

This product information has been compiled to the best of our knowledge and with the greatest of care. We cannot, however, assume any liability for the correctness, completeness or currentness of the contents. Depending on diameter and production technique the technical parameters and the behaviour of the monofilament can vary.