PERLON®
The Filament Company

EnerSave®

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, China, India and in the USA.

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.

EnerSave® – smooth and consistent energy saving

With energy expenditure accounting for up to 35 % of total manufacturing cost, pulp and paper producers have been looking for ways to reduce energy consumption. The majority of energy used in the forming section is related to the electrical consumption of drive motors. It was demonstrated that the energy dissipation resulting from the friction of the forming fabric onto high-vacuum dewatering elements of the paper machine was very significant in that respect. While the design of the fabric is acknowledged to be the most significant factor, the nature of the monofilament used on the machine side can be instrumental. Perlon® developed specific monofilaments aiming at reducing the friction of forming fabrics on the paper machine. These products are marketed under the brand name EnerSave® (see Fig. 1).

6**GQ/GE EnerSave® grades are polyester-based monofilaments which have been specially developed for use as single weft material on the machine side. Depending on the fabric design, these can lower the energy loss due to friction by approx. 10 %. EnerSave® types are characterised by very good resistance to abrasion and outstanding dimensional stability in wet conditions. EnerSave® types also reduce the so-called edge curling of forming fabrics, which may improve the output of paper manufacturers.

8**ZG EnerSave® grade is a modified polyamide which has been designed for use as alternate weft in combination with PET or PBT. Depending on design, it can reduce the energy loss of forming fabrics by up to 5 %. The energy dissipation of forming fabrics against ceramic rolls was investigated in Einlehner AT2000 test equipment (see Fig. 2). The promising performance of EnerSave® monofilaments with respect to energy consumption and lifetime in those laboratory results were ultimately confirmed by numerous successful paper machine runs.

Technical information

Fig. 1 – Performance of forming fabrics using EnerSave® materials with respect to lifetime, energy consumption and dimensional stability

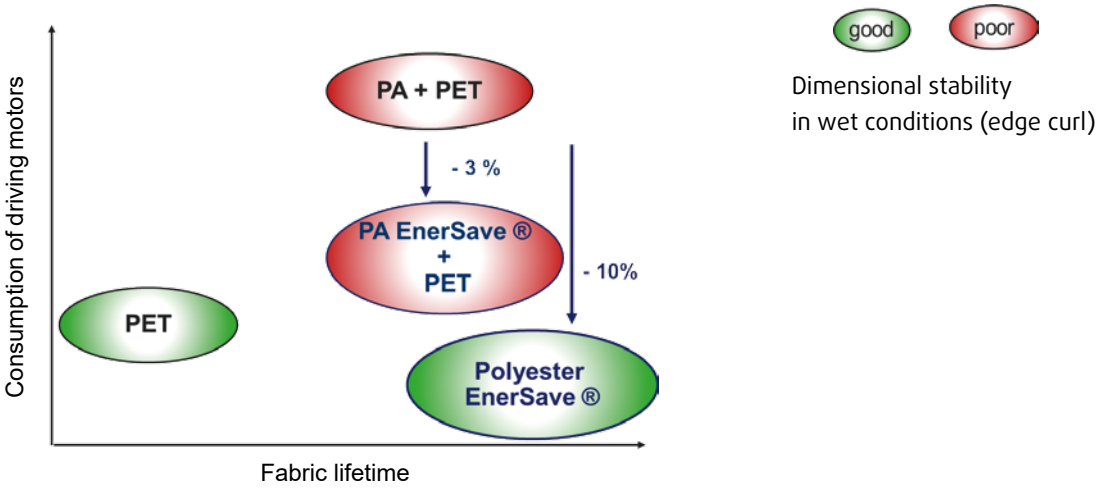
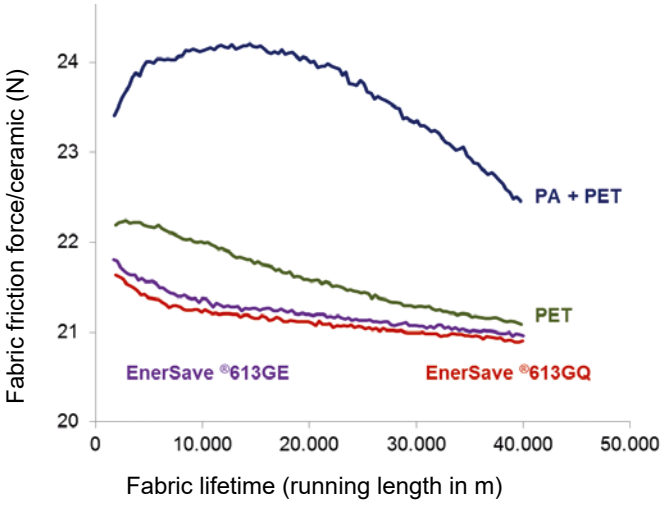


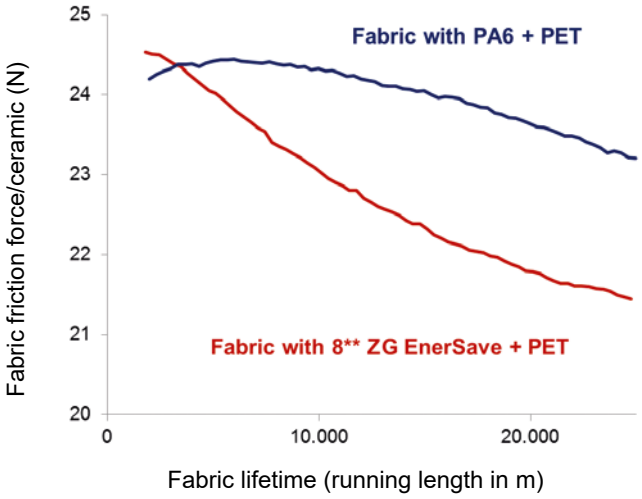
Fig. 2 a/b – Frictional force of forming fabrics using various monofilaments against ceramic dewatering elements over time

Polyester-based EnerSave®



2a – Polyester-based EnerSave® monofilaments 6**GQ/GE ensures energy saving and a steady performance over the fabric's lifetime

Polyamide-based EnerSave®



2b – PA 6 based EnerSave® 8**ZG monofilaments reduce the energy consumption versus regular PA6

Brand related products: 6**GE, GM, GQ / 8**CG, ZG / 9**HG, WQ, YG

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.