

High-Quality Monofilaments



Innovative versatility

VersaFil



Perlon® – The Filament Company

Perlon® - The Filament Company - is an innovative and global group of companies specialising in the production of synthetic filaments. We produce at sites in Germany, Poland, China, India and the USA. We offer an extremely diverse product portfolio for almost every technical application. We are constantly creating new solutions for unique products - Our Engineering. Your success.

VersaFil – innovative versatility

Perlon® has introduced a breakthrough monofilament and is now presenting VersaFil, an innovative product made from a new type of polymer. VersaFil offers an extremely versatile property profile that is unrivalled to date.

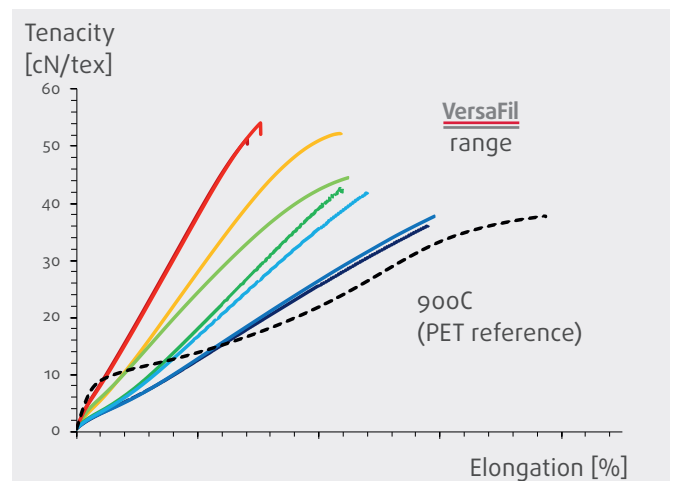
VersaFil opens up new application possibilities by combining a variety of positive properties that were previously unavailable in a monofilament. VersaFil represents a significant advance for Perlon® in a number of areas of application.

VersaFil's convincing properties:

1. Versatile mechanical properties: an inherent softness combined with high tenacities.

VersaFil's softness makes it easy to process especially in weaving. The high tenacities – e.g. linear tenacity (along the monofilament axis) as well as loop-to-loop tenacity (perpendicular to the monofilament axis) provide safety in demanding applications. Beyond that, VersaFil has shown good stability with respect to creeping in lab tests. This is a prerequisite for dimensionally stable fabrics.

Fig. 1: Examples of stress-strain curves of VersaFil in comparison with a 900C type (PET benchmark)

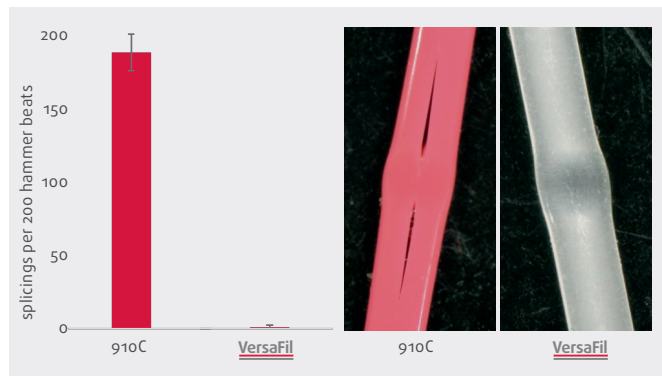


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VersaFil's convincing properties:

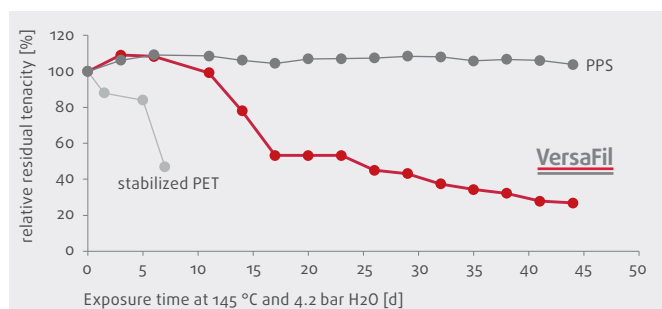
2. Outstanding impact resistance – no splitting or fibrillation neither in lab tests (hammer beat test) nor in field tests facing high pressure shower cleaning.



Cleaning of fabrics using high pressure showers is very challenging for materials as PPS and also PET and can be destructive for those materials. VersaFil can withstand high mechanical strains perpendicular to the monofilament axis and dampen impacts without mechanical failure. In that way, VersaFil has the potential to contribute to a significant increase in the life time of fabrics.

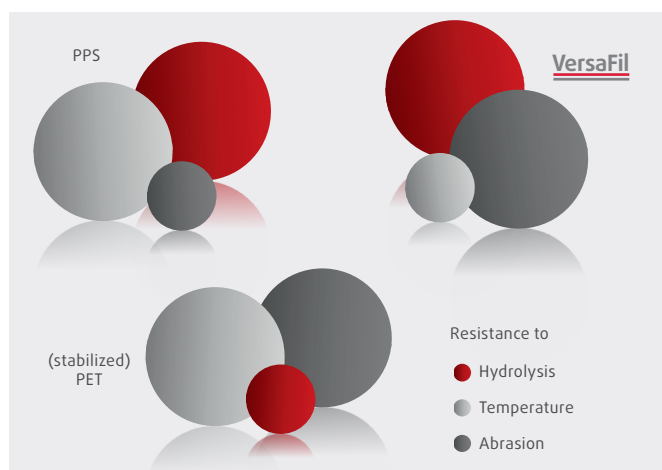
Fig. 2: In the hammer beat test, VersaFil shows significantly less splitting compared to a 910C type (PET benchmark). This indicates an outstanding impact resistance.

3. Very good hydrolysis resistance – even better than PET with maximum stabilization (or even PCTA).



Based on its chemical structure, PET is always prone to hydrolysis, even maximum stabilization can only delay the degradation. In contrast, PPS is completely stable versus hydrolysis. The drawbacks of PPS are its lower mechanical resistance to abrasion as well as its price. VersaFil bridges the gap between PPS and stabilized PET concerning the hydrolysis resistance and comes at a lower price than PPS.

4. Reduced surface adhesion versus common polymer materials and therefore a potentially lower risk of fabric clogging or improved cleanability.



VersaFil offers a novel balance of mechanical properties, hydrolysis resistance and surface properties. This portfolio of properties opens up a wide range of potential applications.

Join us to find the best solution for your challenge!

Product range and nomenclature: 4**K

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 accuracy, integrity or timeliness of its content. The technical parameters and the behaviour of the monofilament can vary depending on diameter and production technique.