



SOFISIL

Polyester fiber product made from society waste

Description

SOFISIL is a high quality polyester fiber product made from Ocean Bound Social Plastic™ suitable for sustainable applications.



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Appearance properties

Mattyfied fibres contain a uniformly dispersed matrix composition (titanium dioxide - TiO₂). Fibre dyed in the mass contains a uniformly dispersed pigment or other dye, usually combined with a matting component.

The staple is produced as semi-matt (M) and glossy or dyed in a mass with a solid rounded cross-section or different geometry of fibres (e.g., a hole, a triangle, etc.). The fibres are crimped, usually fixed, and are characterized by high lightfastness. They are surface-treated to ensure the processability.



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Chemical properties

The fibres in the cold state resist weak acids and alkalis. With strong oxidizing agents, strong acids and bases the fibres get disrupted at temperatures above 40 °C, there is a reduction in the availability. At temperatures above 210 °C, there is a softening and deformation, at temperatures of 245 °C and higher melting occurs.

This article provides very general information. For a specific assessment a practical experimental verification of the suitability of the fibres application for the environment is required, and the manufacturer cannot hold the responsibility for damage resulting from



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Physical-mechanical properties

Polyester staples and SOFISIL tow show the typical properties of this type of fibre. Among them, it is particularly relatively high strength and lightfastness. Fineness, elongation and shrinkage are determined by customer requirements. They can be processed using standard procedures. It is advisable to use both the specifications in use as set out in this standard, and the experience of the manufacturer and the processors.



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General

Characteristics of the product

The staple and polyester tow are, based on their chemical origin, polyester fibres produced by melt spinning of polyethylene terephthalate. This results in an undrawn fibre which is further drawn, a specific finish is applied on it, the crimp is produced, and the properties are usually fixed to the requested level. The resulting product is a tow or staple, obtained by cutting the tow to a certain length.



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Use

Depending on the method of further processing, the tow and staples are divided:

(A) Fibres for the production of nonwovens

- for processing into nonwoven fabrics chemically or heat-treated
- for processing into nonwoven fabrics with a water jet (chemically or heat-treated)
- for processing into nonwoven fabrics reinforced by needle (or chemically or thermoset)

(B) Spinning the fibre

- for cotton processing technology (lower linear weight)
- for wool processing technology (usually higher linear weight)

Health safety

All types of polyester staple and tow SOFISIL are regularly tested under the Öko-Tex Standard 100. All the checks made so far have confirmed that the polyester staples and tow SOFISIL meet the most demanding criteria of product category I - products for children under the age of 3 years. Öko-Tex Standard 100 is compatible with the Decree of the Ministry of Health of the Czech Republic 84/2001 Coll. on hygiene requirements for toys and products for children under three years of age. At the same time, the SOFISIL fibres are labelled with the Ecolabel mark.



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Packaging

The packing unit of the staple and the tow is a bale. The standard bale weight ranges from 220 kg to 380 kg. Exceptionally, the range may be exceeded.

The used packaging protects the staple from contamination.

The packed tow layout must be uniform to ensure trouble-free pulling of the tow from the package. Both the beginning and end of the tow must be marked.

Each bale (packaging unit) is identified with label.

The fibre is sold with a mass weight at nominal humidity based on the BISFA Technical Standard on Commercial Mass, revision 2007.



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Storage

The products are transported in sheltered weather-protected vehicles. The storage area must be clean and packaging units must be stored and transported in such a way as not to be subject to possible damage. The warranty period for staple and tow is 6 months from the date of delivery.

Packaging units are stored in dry rooms protected from climatic influence, conditions common to textile materials. Before processing, the fibres must mature (acclimate) at relative air humidity and temperature recommended for processing PES fibres.



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Safety and health at work

Polyester fibres are not classified as dangerous preparations within the meaning of REACH 1907/2006/EC and 1272/2008/EC (Act 350/2011 Coll., as amended). In case of contact with the fibre, it is necessary to use appropriate personal protective equipment specified by the respective operating instructions of the convertor.

Standard hygiene measures must be followed - do not eat, drink and smoke when dealing with fibres; before work and after work wash your hands with soap and water.