

**SEFAR® PCF**

**Product description**

SEFAR® PCF is a innovative, unique industrial pre-coated screen printing mesh. SEFAR® PCF consists of a Sefar high modulus screen printing mesh coated with a solvent resistant emulsion. SEFAR® PCF is specially developed for the production of top quality screen printing stencils, and for their subsequent use for the most challenging screen printing applications.

**Applications**

- Plastic containers
- Labels
- Glass hollow ware
- Optical discs
- And many others

Product properties	Technical data*	Unit
Yarn material	High modulus polyester	PET
Color of mesh	White / Yellow	W / Y
Weave	1:1 / 2:2, 2:1	PW / TW

Scope of product range (Minimum to maximum values)

Mesh count	120 (305)	180 (460)	cm <sup>-1</sup> (inch <sup>-1</sup> )
Tol. of mesh count	3 (8)	5 (11)	cm <sup>-1</sup> (inch <sup>-1</sup> )
Thread diameter nominal**	27	34	Ø in µm
Mesh opening	22	49	µm
Mesh thickness	43	61	µm
Tol. of mesh thickness	+/- 2	+/- 4	µm
Open area	13	47	%
Theoretical ink volume	9	17	cm <sup>3</sup> /m <sup>2</sup>

\*All values refer to untensioned mesh. \*\*Thread diameter nominal before weaving.

Emulsion specifications	Technical data
Photosensitive emulsion PCF FC (Fully coated – high resolution)	Dual cure diazo UV polymer, *solvent resistant
Photosensitive emulsion PCF HS (High speed)	Highly reactive UV photopolymer, *solvent resistant
Photosensitive emulsion PCF CD (Compact/optical disc)	UV photopolymer, *solvent resistant
Color emulsion PCF FC	Dark green
Color emulsion PCF HS	Dark red
Color emulsion PCF CD	Green
Wavelength sensitivity PCF FC (Fully coated)	350 – 420 nm
Wavelength sensitivity PCF HS (High speed)	340 – 420 nm
Wavelength sensitivity PCF CD (Compact/optical disc)	320 – 380 nm
Mesh width	115 / 134 / 158 cm
Coating width	99 / 118 / 142 cm
Coating build-up	3 – 8 µm
Coating build-up tolerance	+/- 1,0 µm

\*Using hardener SEFAR® PCF is also water resistant

**Stress-strain characteristics**

The physical values of SEFAR® PCF correspond to those of SEFAR® PET 1500.

**Storage and processing information**

- Store only dry and in the absence of UV light.
- 20-25°C, 40-65% relative humidity.
- Process only in the absence of UV light (Yellow light, no UV light-transforming windows).
- Climatic conditions: 20-30°C, 40-55% relative humidity.
- Stretching and gluing: Please follow the processing instructions.
- Exposure: Optimal copying results can be determined by means of a step exposure.
- Development: Both sides of the print form should be slightly moistened for about 30 seconds and then soaked with warm water (Max. 25 °C) then well developed on both sides. Insufficient developing can result in printing problems cause due to residues in the mesh openings.
- Follow directions for workplace, health and environmental safety as stated in Directive 1907/2006/EC.

**Comparison of exposure times of emulsion-types**

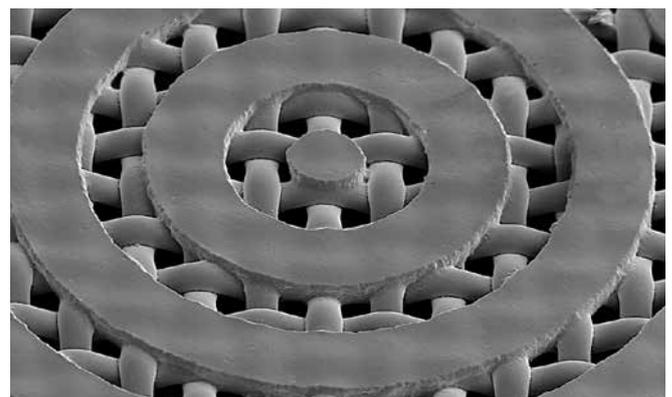
Mesh	Units	[%]	UV-A at 100% exposure time [mJ/cm <sup>2</sup> ]
SEFAR® PCF FC 150-31Y PW 4 µm EOM	80	100	4550
SEFAR® PCF CD 150-31Y PW 4 µm EOM	50	62.5	2832
SEFAR® PCF HS 150-31Y PW 4 µm EOM	30	37.5	1715

Exposure: Aktitron S16; distance – 1.25 m; power – 5000 W / 1.9 mW/cm<sup>2</sup>

**SEFAR® PCF is available in the following versions**

- SEFAR® PCF FC (Fully coated)
- SEFAR® PCF FC HS (Fully coated, high speed)
- SEFAR® PCF PC (Partially coated)
- SEFAR® PCF PC HS (Partially coated, high speed)
- SEFAR® PCF CD (Partially coated for compact/optical discs)
- SEFAR® PCF CD HS (Partially coated for compact/optical discs, high speed)

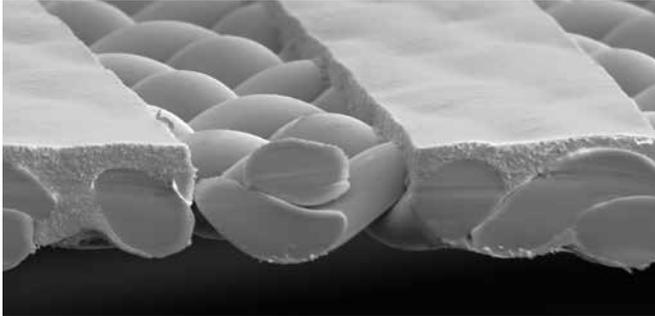
**REM image stencil quality**



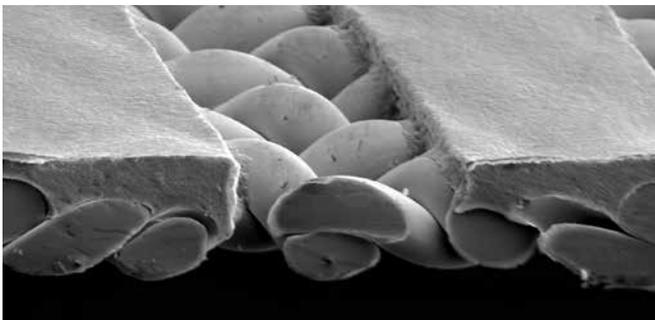
80 µm circle lines SEFAR® PCF FC 150/380-31Y, 7 µm EOM (Coating build-up)

 **SEFAR® PCF**

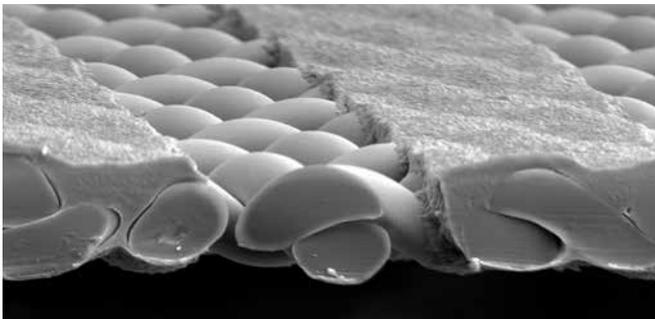
**Coating/emulsion types**



SEFAR® PCF FC 180/460-27Y, 3 µm EOM



SEFAR® PET 1500 180/460-27Y, 15 µm capillary film, 7 µm EOM



SEFAR® PET 1500 180/460-27Y, direct emulsion with 4 µm EOM

**Label and roll lengths**

The label contains important information required for the processing. Important are:

- Product line
- Invoiced roll length
- Gross roll length
- Mesh thickness and mesh thickness tolerance
- Actual number of threads per cm/inch and tolerance in warp direction
- Actual number of threads per cm/inch and tolerance in weft direction
- Coating width cm/inch and tolerance
- Mesh width in cm/inch
- Coating thickness in µm
- Weave type
- Coating date
- Article number
- Piece number

Identification of sales roll	Roll length including tolerance
Invoiced length	30 m +/-20 m
Gross length	30 m +40/-20 m

**Test conditions:** All values refer to the following climatic conditions: Temperature 22 ± 2 °C, relative humidity of 50 ± 10%. Aggressive chemicals and improper storage can negatively affect the physical properties of the mesh.

**Note**

The product data stated here and our advice on application technology, in verbal and written form and on the basis of tests and experiments, are provided to the best of our knowledge and belief; however, this information must be regarded as non-binding. It is based on our current knowledge and experience, and on standardized process and test conditions as per DIN standards 16610 / 16611 / 53804 and ISO 13934-1 / 5084. As many variations may occur due to each specific application, we are unable to provide an overall assessment regarding the range of fluctuations for processes and follow-up processes (i.e. parameters, interactions with materials and machines used, and chemical reactions). For this reason, the parameters we recommend should be understood merely as values for guidance purposes. All the illustrations, descriptions, data, diagrams and tables, etc., shown here may change without prior notice, and they do not represent the contractually agreed characteristics of the product. It is impossible for us to have control over the post-processing of our products, so the user is solely responsible in this regard. Our products are sold and distributed in accordance with the latest version of our General Terms and Conditions of Sale and Delivery.



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