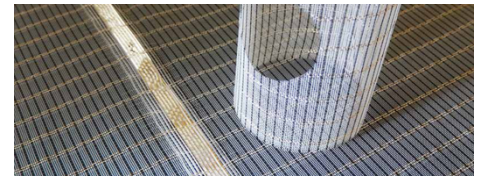
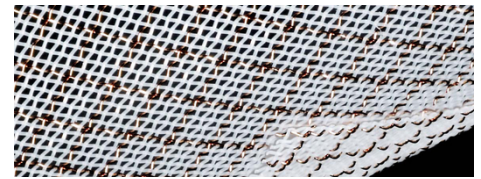


Smart Fabrics

'Electronic fabrics' combine the advantages of two worlds – the flexible shape of fabrics and the functional flexibility of electronics.



Product Features

To cope with the demanding environment of the various industries, Sefar has developed a Smart Fabric range in order to maximize the customer's value. Our fabrics not only satisfy a single purpose, e.g. filtration, but can also, for instance, be made to generate heat, used as transparent electrodes, to illuminate or sense physical parameters.

DOWNLOADS

[Smart Fabrics \(PDF 873 kb\)](#)

Monofilament & multifilament

Single layer & multilayer fabric

Polymers

PET, PA, PP, PEEK, PEN, ETFE, PTFE, PVDF, PBT, ...

Weaving pattern

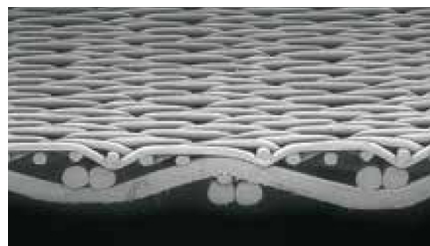
Twill weave, satin weave, plain weave

Diameters

19 µm...2,000 µm



Human hair vs. fine yarn



Double layer weave

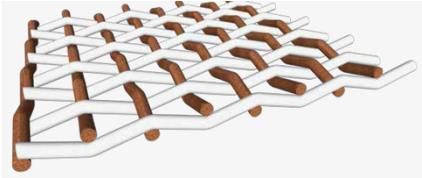
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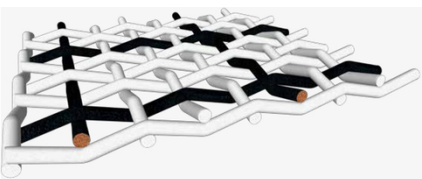
Metal polymer hybrid

«Electronic fabrics», combine the advantages of two worlds – the flexible shape of standard fabrics and the functional flexibility of electronics. Our Smart Fabrics often consist of a polymer fabric as a basis with woven-in electrically conductive filaments. The filaments may be pure copper wires, steel wires, twisted yarn, conductively plated yarn and many more.

Type: plain wire, twisted yarn, tinsel, coated multifilament, stranded wire

Material: Cu, Cu-alloys, Ag, Au, Al, Mo, Ti, W, ...

Diameters: 20 µm...2,000 µm



Wire top coating

With an additional surface treatment, other special features, such as corrosion protection, better contact resistance, higher chemical resistance, electrical isolation and others, can be achieved with one product.

Coated wires material: Ag, Sn, Ni, Pt, PEDOT, carbon, ...

Isolated wires material: PU, PET, PI, PA, ...

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Fabric top coating

Sefar has the ability to fully coat their fabrics. Thus, e.g. with a polymer-based fabric, a sheet resistance of approximately $1.0 \Omega/\text{sq}$ is conceded or the optics are changed so that you have a full metallic look.

Material: Al, Ag, Cu, Au, Cr, Mo, Ti, TiOx, Sn, SiOx, alloys, ...