



## InnoSolTEX®

### THE MODULAR COATING SYSTEM

All functions can be implemented by any combination (tested on 100 percent PET based textiles).

Our **modular system offers the option** of implementing your individual profile of requirements.

#### Appropriate features for your product requirements

- abrasion resistant
- flame retardant
- antimicrobial
- antistatic
- hydrophobic
- washproof

InnoSolTEX® is exempted from any mandatory registration in accordance with the REACH regulations. The reactants of the InnoSolTEX® coating, according to regulations, are either pre-registered or registered. This information corresponds to our current knowledge as well as the state of the legislation at the date of issue. Any other existing laws are to be observed by the recipient of our products on their own responsibility.

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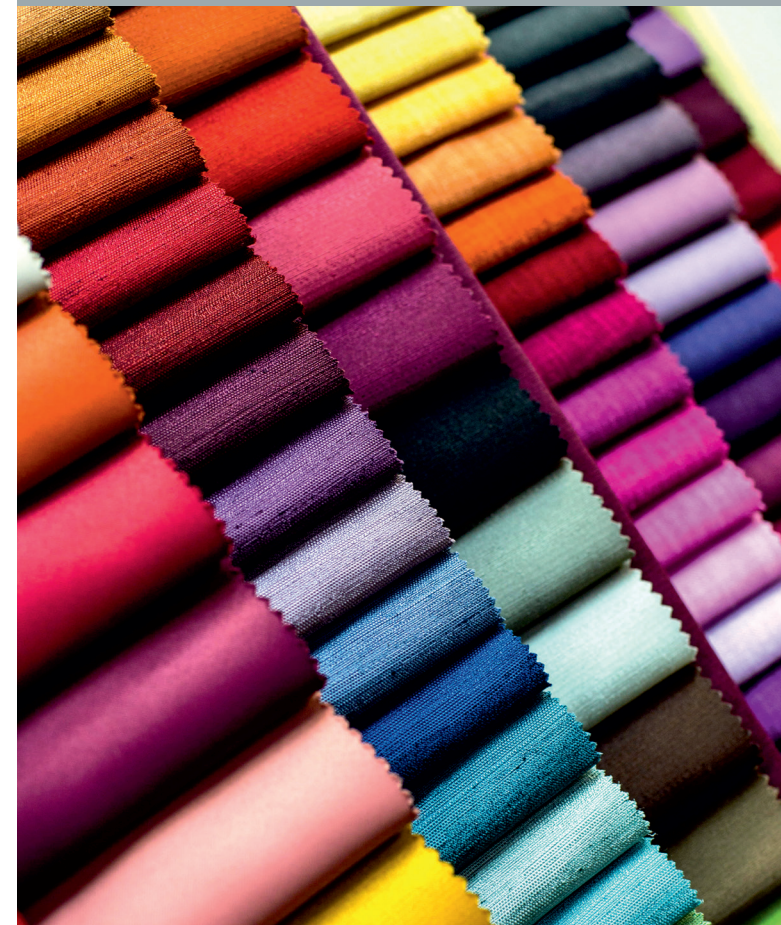


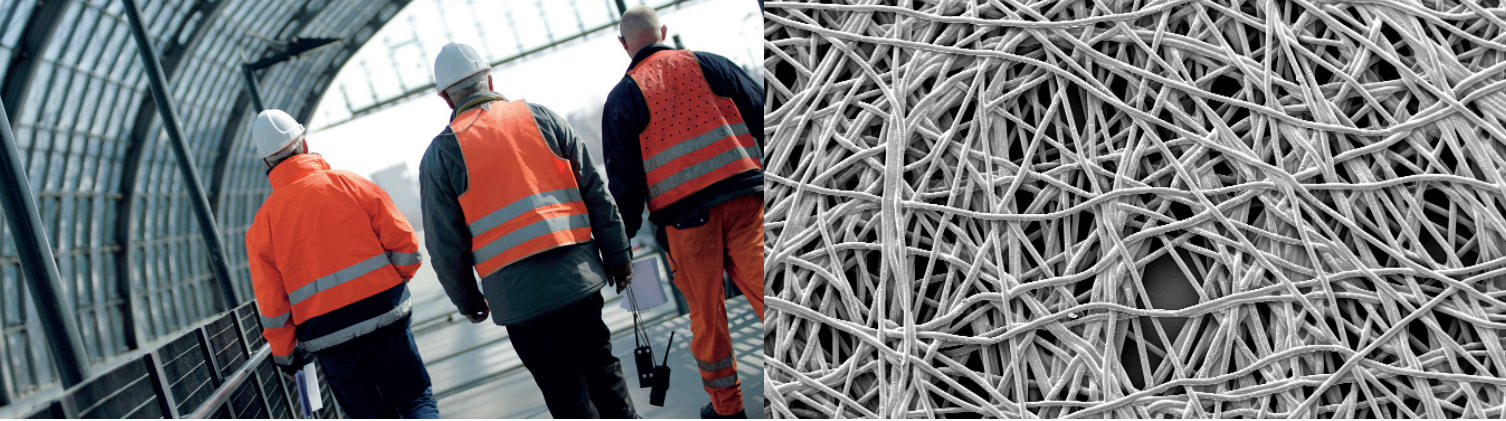
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## ALL IN ONE – InnoSolTEX®

6 FUNCTIONS IN ONE COATING SYSTEM





## STATE OF THE ART

Textiles and textile fabrics today are high-tech materials and not just used for functional or protective clothing.

Technical sectors, such as the construction and automotive industries, use technical textiles e.g. for light-weight solutions, and the nonwovens are an integral part of high-tech filter applications.

Due to their wide range of applications, modern textile fabrics have to meet extreme requirements in terms of strength, abrasion resistance or flame resistance. Without treatment to the original fabrics, these application targets are not realizable.

Frequently, incompatible properties are required to be combined with one another in textile finishings. So far, this has only been done by means of multiple coatings on the fabrics or by laminates of different materials to achieve the desired properties.

This is expensive, complex and possibly also limits comfort or even the technical application.

## THE CHALLENGE

The joint research project NanoSolTex, funded by BMBF (German Federal Ministry of Education and Research) started with the more than ambitious target of combining the following functions in one refining coating system: **abrasion resistant, flame retardant, hydrophobic, antimicrobial, antistatic and washproof**. Moreover, the laquer had to be waterbased.

### Successful cooperation of R&D and medium-sized enterprises

Project partners of the Fraunhofer ISC were the Saxonian Textile Research Institute STFI and the medium-sized enterprises Schneider Textilveredlung GmbH, Alterfil Nähfaden GmbH, ROWO Coating Gesellschaft für Beschichtung mbH and T\_O\_P Oberflächen GmbH (now part of Aalberts Surface Treatment GmbH).

Two years of intensive and fruitful cooperation have resulted in a multifunctional textile coating. The new coating system not only allows the combination of several functions but can also be customized and adjusted to special requirements.

## THE BREAK-THROUGH

### ORMOCER®s for high performance products

ORMOCER® chemistry is one of the most outstanding competences of Fraunhofer ISC and has again been successfully used in the NanoSolTex Project. The inorganic-organic ORMOCER® compounds specifically developed for this purpose are the basis for the innovative coating systems which, for the first time ever, facilitate a combination of previously incompatible functions.

The textile industry thus has a finishing system at hand which, depending on the substrate, fulfills a wide range of requirements with up to six functions in a single coating solution.

### Overview of the benefits

- waterbased coating material
- only one process step
- lower energy and production costs
- deployable on conventional industrial machines
- drying and crosslinking times are comparable to conventional textile finishings