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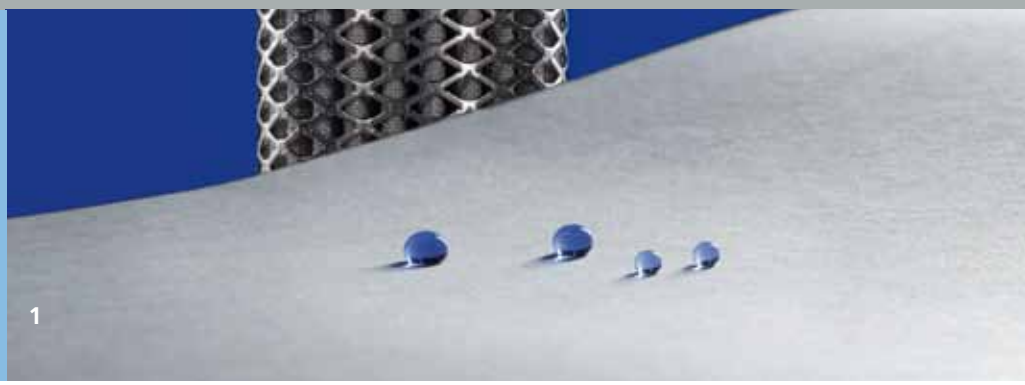
FRAUNHOFER-INSTITUT FÜR FERTIGUNGSTECHNIK UND ANGEWANDTE MATERIALFORSCHUNG IFAM



1 *Filter with improved chemical resistance and longer service life due to an ultra-thin plasma-polymer coating.*

SURFACE MODIFICATION

Low pressure plasma technology
Atmospheric pressure plasma technology
VUV technology

The experts of Plasma Technology and Surfaces – PLATO – at Fraunhofer Institute for Manufacturing Technology and Advanced Materials IFAM offer solutions for
fine-cleaning,
surface activation as well as
functional coatings.
These technologies of different surface modification allow economical treatment of either large or localized areas depending on the specific requirements.

Thus a wide range of different and combinable surface properties can be achieved, which means that these technologies are ideal for innovative product development. For example, the surface energy, which is a measure of the hydrophobic or hydrophilic character of a surface, can be varied from 5 mN/m to 80 mN/m with lasting stability of the effect.

Example applications

Adhesive bonding and paint/lacquer technology
- Permanently hydrophilic surfaces
- Optimization of wetting properties
- Improvement of adhesion
- Adhesion promotion

Plastic processing/Textile technology
- Hydrophobic surfaces
- Anti-fouling properties
- Non-stick layers
- Permanent release layers
- Soft-feel fabrics or textiles
- Hydrophobic or oleophobic properties with permeability to water vapor
- Reduction of water absorption

Protection of surfaces
- Transparent corrosion protection
- Local corrosion protection
- Diffusion barriers
- Scratch protection
- Friction reduction

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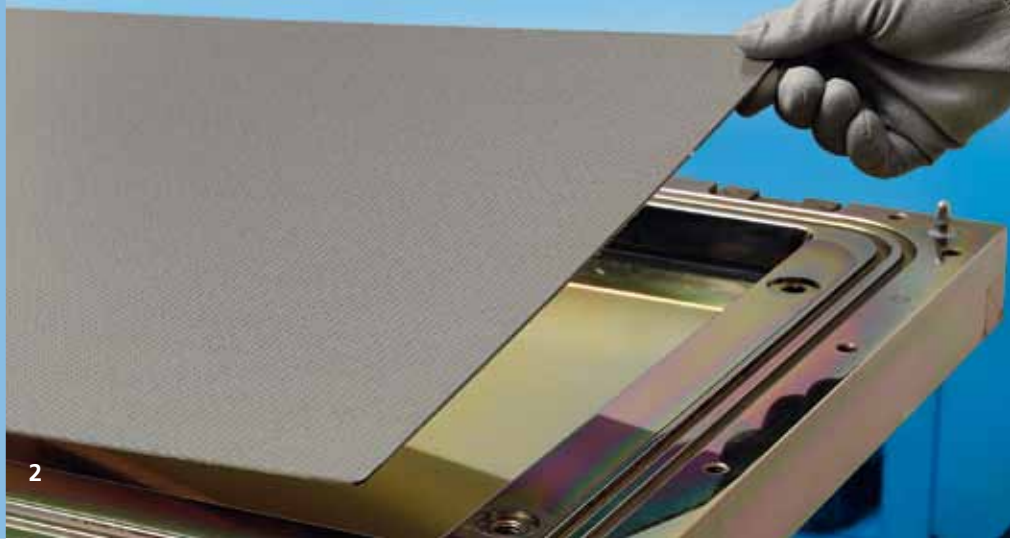

Medical applications

- Non-cytotoxic, antimicrobial effect

➔ Most of the effects can generally be realized independent of the substrate material.

Contact

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2 *Permanent release layer to allow molded CFRP components to be removed from molds.*