Sol-Gel-Nanocomposite coating

Fluorinated, nanoscaled Sol-Gel-Nanocomposite type N(H) 13

Properties

- Hydrophobic and oleophobic surface
- Easy-to-clean coating
- Coating thickness in low nanometer range
- Not visible
- Very high temperature stability
- Hard and abrasion resistant surface
- Diffusion barrier versus metal ions

Physical properties	
Non-stick	very good
Contact angle to water	approx. 105°
Contact angle to hexadecane	> 60°
Colour	colourless, transparent

Substrate materials	
Metalle	nein
Glas	ja
Silizium Wafer	Ja
Silikathaltige Stoffe	ja
Mineralische Oberflächen	bedingt

Chemical resistance	
Solvents	excellent
Organic acids and oils	good
Inorganic acids	partly
Inorganic bases	weak

Coating process	
Coating thickness	few nm
Dipping process	yes
Spray application	partly
Polishing application	yes
Maximal thermal substrate stress	RT – 120°C

Fields of application

- Diagnostics: Easy-to-clean of hollow needles, high reduction of carry-over (blood, peptides, proteins etc.), improvement of the drip off properties, improvement of lifetime, no visual interference
- Chromatography: Coating of glass capillaries with small inner diameters
- Industry / general: Easy-to-clean glass surfaces, dirt protection layer, improvement of lifetime of sight glasses, improvement of the drip off properties for small volumes (i.e. oil)

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