

NanoTechnology Made in Germany

Medical Healthcare





Welcome

to the heights of the
Thuringian Forest



GBneuhaus (GBn) is a leading supplier of individual coating solutions that are matched to the customers' needs. We distinguish ourselves from our competitors through continuous innovations. This brings us advantages on the market in terms of techniques and technology. We invest in the latest manufacturing facilities and a high level of automation. Our coating solutions are unique for the relevant customer application.



NanoTechnology changes surface properties

As a specialist for innovative coating solutions, our portfolio covers a wide spectrum of functional and decorative coating systems for a variety of possible applications.

These coatings allow our customers to finish their products in various ways according to their needs. Defined attributes are either created or significantly improved, whereby multiple effects can be combined in one single coating system.

The innovative solutions from GBneuhaus GmbH thus enable a significant improvement of defined criteria such as colour luminosity, colouring, scratch resistance, electrical conductivity, UV-resistance, IR-reflection, temperature stability, water-repellent, antimicrobial or hydrophobic characteristics (non-stick effect – “easy to clean”).





SANPURE® Antimicrobial coating



GBneuhaus GmbH and ras materials GmbH developed in cooperation the peak effective **SANPURE®** coating which combines the distinguished properties of Sol-Gel-Coating with the antimicrobial function of silver nanoparticles. Due to this functionality the reproduction and increase of dangerous multi-drug-resistant germs can be reduced permanently and safely. The active ingredient AGPURE nanosilver has been registered according to EU 528/2012 (Reg. Nr. 29919, Reg. Nr. N-29916).



SANPURE®
ANTIMICROBIAL COATING

SANPURE®

Antimicrobial coating

SUBSTRATES

- » glass (borosilicate glass, soda-lime glass, quartz glass)
- » ceramics
- » metal (stainless steel, chrome, aluminum)
- » plastics (polycarbonate, PMMA, polyethylene, polyester, polypropylene)
- » other materials on request

PROPERTIES

- » lifetime antimicrobial efficiency (ISO 22196 // JIS Z 2801:2010, R-value till >4)
- » reduces the increase of dangerous microbes between cleaning cycles
- » abrasion resistant
- » transparent; colored on request
- » physiological harmless
- » imperceptible by touch, feel and look remains unchanged
- » chemically resistance against conventional cleaning and disinfection agents

TECHNOLOGY

- » dip coating
- » spray coating
- » others on request

PROCESS DEVELOPMENT

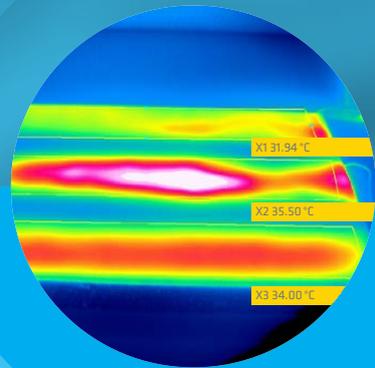
- » in-house research and development at GBneuhaus

SERIAL PRODUCTION

- » at GBneuhaus' production facilities
- » after process validation possibility of integration in customer's manufacturing lines, supply of coating material by GBneuhaus



GBconductive Electrically conductive coating



In many areas of active heating or printed electronics, transparent conductive coatings are required. GBneuhaus provides a range of innovative nano-coatings, including the electrically conductive coating **GBconductive** particularly for substrates like plastics, glass or ceramics.

GBconductiv

Electrically conductive coating

SUBSTRATES

- » plastics (polycarbonate, polyether ether ketone [PEEK], polyether sulfone [PES] a.s.o.)
- » glass (borosilicate glass, soda-lime glass, quartz glass a.s.o.)
- » ceramics (porcelain, glazed ceramics a.s.o.)

PROPERTIES

- » prevention of electrostatic charging on surfaces
- » specification:
 - › specific surface resistance according to DIN IEC 60093:1993-12
 - › $R = 30 \Omega - 2000 \Omega (10^1 \Omega - 10^3 \Omega)$
 - › transparency > 80 %
- » maximum of temperature treatment: 200 °C
- » adaptation to special environments, substrates and combinations of them
- » transparent, individually coloured on request
- » combinable with antimicrobial (SANPURE®) and/or hydrophobic features
- » film thickness: from three-digit nanometer up to single-digit micrometer range
- » mechanically flexible
- » scratch-resistant and abrasion-resistant
- » no change in haptic quality of substrate

TECHNOLOGY

- » dip coating or spraying
- » thermal hardening / UV or IR curing
- » others on request

PROCESS DEVELOPMENT

- » in-house research and development at GBneuhaus

SERIAL PRODUCTION

- » at GBneuhaus' production facilities
- » after process validation possibility of integration in customer's manufacturing lines, supply of coating material by GBneuhaus



GBantistatic

Antistatic coating



In many areas of industrial manufacturing as well as households static charges are quite frequently a source of damage and contamination. GBneuhaus provides a range of innovative nano-coatings, including the antistatic application **GBantistatic** particularly for substrates like plastics, glass or ceramics.

GBantistatic

Antistatic coating

SUBSTRATES

- » plastics (polycarbonate, polymethyl methacrylate [PMMA], polyethylene, polyester, polypropylene a.s.o.)
- » glass (borosilicate glass, soda-lime glass, quartz glass a.s.o.)
- » ceramics (porcelain, glazed ceramics a.s.o.)

PROPERTIES

- » prevention of electrostatic charging on surfaces
- » specification:
 - › specific surface resistance according to DIN IEC 60093:1993-12
 - › $R = 100 \text{ k}\Omega - 100 \text{ G}\Omega$ ($10^5 \Omega - 10^{11} \Omega$)
 - › transparency $> 80 \%$
- » maximum temperature $200 \text{ }^\circ\text{C}$
- » customised to specific environments, substrates, and even combined substrates
- » transparent, individually coloured on request
- » combinable with antimicrobial (SANPURE[®]) and/or hydrophobic features
- » film thickness from triple-digit nanometer to single-digit micrometer range
- » mechanically flexible
- » scratch-resistant and abrasion-resistant
- » no change in haptic quality of substrate

TECHNOLOGY

- » dip coating or spraying
- » thermal hardening, further curing on request

PROCESS DEVELOPMENT

- » in-house research and development at GBneuhaus

SERIAL PRODUCTION

- » at GBneuhaus' production facilities
- » after process validation possibility of integration in customer's manufacturing lines, supply of coating material by GBneuhaus

GBhydrophobic Water-repellent coating



In many areas hydrophobic functionalities are required for easier cleaning of surfaces. GBneuhaus provides a range of innovative nano-coatings, including the water-repellent coating **GBhydrophobic** particularly for substrates like plastics, glass or ceramics.

GBhydrophobic

Water-repellent coating

SUBSTRATES

- » plastics (polycarbonate, polyether ether ketone [PEEK], polyether sulfone [PES], others on request)
- » glass (borosilicate glass, soda-lime glass, quartz glass a.s.o.)
- » ceramics (porcelain, glazed ceramics a.s.o.)

PROPERTIES

- » specification: angle of contact for water $\Theta \geq 105^\circ$
- » maximum temperature: 200 °C
- » adaptation to special environments, substrates, and even combined substrates
- » transparent, individually coloured on request
- » combinable with antimicrobial (SANPURE®)
- » film thickness: from three-digit nanometer up to single-digit micrometer range
- » mechanically flexible
- » scratch-resistant and abrasion-resistant
- » no change in haptic quality of substrate

TECHNOLOGY

- » dip coating or spraying
- » thermal hardening, further curing on request

PROCESS DEVELOPMENT

- » in-house research and development at GBneuhau

SERIAL PRODUCTION

- » at GBneuhau's production facilities
- » after process validation possibility of integration in customer's manufacturing lines, supply of coating material by GBneuhau




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