

## Less germs and bacteria

# POWDER COATED SURFACES SHOULD PREVENT INFECTIONS

*With a germicidal powder coating layer, you can reduce the number of germs and bacteria on metal furniture or doorknobs. In doctor's offices or hospitals, the permanent protection powder coating layer should help to reduce the number of infections.*

Each year approximately 700'000 people get infected in Germany through germs and bacteria in hospitals. The main carrier and trigger of the infections are secretions from mouth and nasal mucosa. An introduced germ and bacteria are a major hazard for patients with a decreased immune system. This group gets infected during a stay in hospital or a doctor visit easily and often with serious consequences. The company G. Heinemann Medizintechnik GmbH from Kaltenkirchen (Schleswig-Holstein) offers a solution to reduce this risk. The company manufactures treatment units for the NNE-(neck-nose-ears) area treatment and relies on a special type of surface treatment. "We cover all of our units by default with an permanent protection powder coating. In addition to the long-lasting protection against corrosion, this type of surface treatment prevents persistent germ formation", says Jakob Hoffmann, product and marketing manager at Heinemann Medizintechnik GmbH.

The special powder coating layer acts preventively and kills germs 24 hours per day, where, a normal disinfection loses already their effect after four to five hours. The new powder coating layer offers to the patient a sustainable protection against infections.

Since 2011 the Heinemann has successfully focused on a medical technology on the permanent protection powder called POLYFLEX® PES-STERIDUR II at Karl Bubenhofer AG. "The powder coating is successfully used in different applications like door handles, window handles, monitors in the operating room, metal ceiling, ventilation systems and HNO- furniture", so Herbert Lohmann, area sales manager of KABE Pulverlack Deutschland GmbH.

At the beginning these powder coatings had silver nanoparticles, the effectiveness of which but deteriorated after a relatively short time. Metal ionic compounds are used today, proven permanent protection acting over a very long time. "The germ-killing effect works so long in principle as long the powder coating on the workpiece is liable", so Herbert Lohmann.

The application of powder coating by means of electrostatic guns. During the stoving process, the coating combines permanently with an underground. "In comparison to liquid painted workpieces powder coated parts are much less sensitive to hits and scratches. The powder coating is also long term colourfast and is easy to clean with many antiseptics", says Lohmann. Also no inactivation of the active substance takes place despite daily cleaning.

"In addition to the hygienic benefits the use of permanent protection powder coating is also an important marketing tool. There are the so-called unique features of great importance especially for some international markets. For this reason detailed specifications for colors are already listed in the specifications", explains Jakob Hoffmann. The hygienic benefits prevail, due to the increased controls in the ENT practices from the Health Department in Germany.

The ENT units are coated with fine structured powder coatings. This slightly rough surface raised questions at the beginning of the users, because basically, a smooth lacquer is considered to be more cleaning-friendly than a structured coating. Herbert Lohmann can however allay these concerns: "The structure formation of the powder coat-



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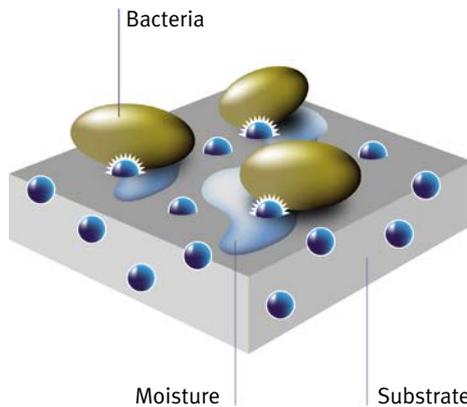
Jakob Hoffmann, product and marketing manager at Heinemann Medizintechnik

ing is reached with Teflon, the surface, in comparison to an object covered with smooth paint, can be much easier to clean." One can imagine to clean it like in a Teflon pan.

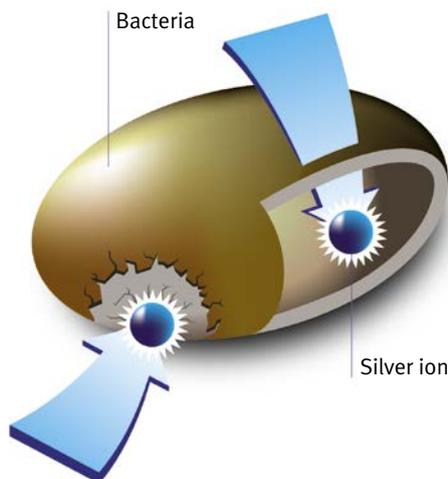
Does a coating with an permanent protection powder coating requires a special technology or special method? Börger company, that performs as a certified powder coating company commissioned by Heinemann, the coatings of furniture parts, denies it. The parts are normally integrated in the working process of powder coating. First a primer is applied and then the layer of fine structure powder coating.

This guarantees the fulfilment of high demands on the appearance and quality of furniture by Heinemann.

Heinemann offers his ENT treatment units in various colour combinations. Highlight in a colour scheme is a special model "Modula Europe Harlequin", which components are designed in various colours. Jakob Hoffmann: "This beautiful piece was donated to the UKE children's clinic in Hamburg. The variety of colours will hopefully take the fear some children and make a visit at the doctors more pleasant for small patients." Report created 06/2013



Silver takes on moisture to dust mites and inactivates it.



So fights silver bacteria:

1. Destabilised cell membrane
2. Blocked breathing
3. Food intake prevented
4. Impossible cell division

**Permanent protection powder coatings**

The applicable electrostatic powder coating is characterized by a broad spectrum of activity against bacteria. It inhibits the development of the germ, and ensures a high level of hygiene. At the same time it reduces the spread of bacterial-related odors. In a field experiment in the University Clinic Marburg a 46% higher germ killing has been stated, compared to the current wipe disinfection.

The active ingredient is a FDA compliant for all types of polymers in contact with food, including manufacturing equipment,

packaging materials, transport, and storage systems. It meets also the requirements of the EU-regulation no. 10/2011 relating to plastic materials and articles, designed for the food industry.

The powder-coated surfaces have a long-lasting protection. The permanent protection powder is available as epoxy / polyester powder coating and polyester quality suitable for all common metallic surfaces in all shades and custom-oriented variants.

G. HEINEMANN MEDIZINTECHNIK GMBH  
KALTENKIRCHEN

*G. Heinemann Medizintechnik has been for years a leading provider for an ENT medical technology. The company sees itself not only as a producer of ENT treatment unit, but also as an expert consultants and sales partner of a practice planning up to the complete equipment in clinic and practice.*

