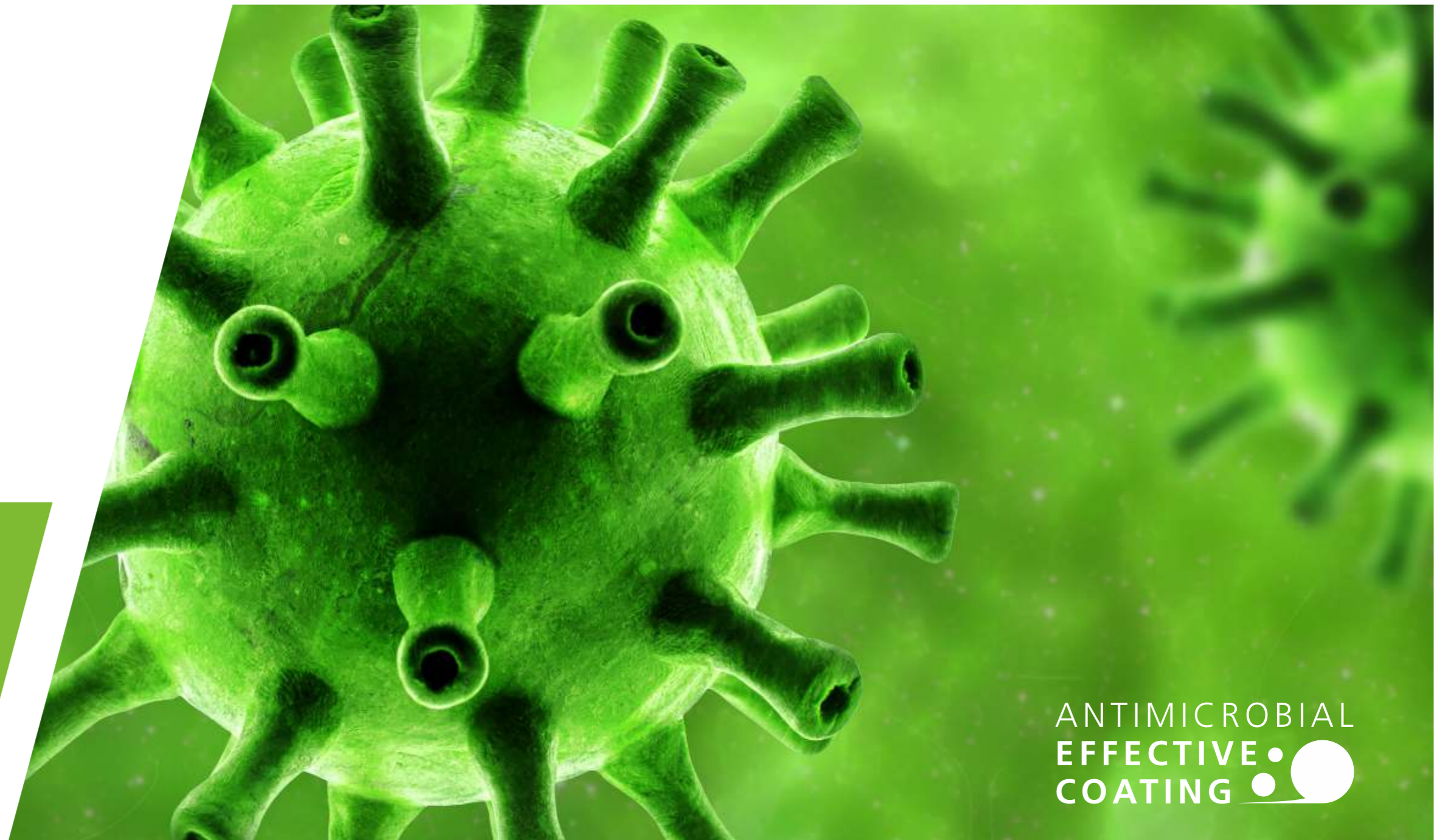


the air handling company

Permanently hygienic:

Antimicrobial Coating



- Proven effective: After more than ten years, the coating remains an effective barrier against micro-organisms.
- Permanent protection: Antimicrobial coating by robatherm prevents the formation of dangerous biofilms.
- Are you responsible for the quality of room air? With AHUs by robatherm, your responsibilities will be met safely and on a long-term basis.

ANTIMICROBIAL
EFFECTIVE •
COATING •

Antimicrobial Coating.

Air handling units process air to ensure its quality and, thus, the hygienic conditioning permanently. Operators, installers and planners of AHUs have a fundamental responsibility for preventing people from being endangered by microorganisms.

To prevent microorganisms from settling inside the AHU, robatherm offers AHUs with a long-acting antimicrobial coating. The coating makes a valuable contribution even in reducing multi-resistant germs and ensuring lasting hygienic air conditioning.



AHUs for the conditioning of fresh air for clean rooms.

Prevention of danger is crucial.

Every day, an adult breathes approximately 11,500 liters of air. In some cases, conditioned room air accounts for 90% or more of the overall air volume breathed. This fact clearly illustrates the importance of room air quality.

Settling and proliferation of microorganisms

Under certain conditions, microorganisms such as bacteria, fungi or algae can settle and proliferate on any imaginable surface where they form a thin mucus layer, the biofilm. This layer also protects the microorganisms. In the biofilm, their immunity against nutrient shortage, extreme pH and temperature fluctuations, bactericides, but also UV and X-radiation increases. This counteracts cleaning and preventive measures that rely on heat, cleaning agents or radiation.



Effective protection: The thermal panels' antimicrobial powder-coating.



The active principle of the antimicrobial coating.

Sustained, effective protection

The antimicrobial additives incorporated in the robatherm powder coating are organometallic substances having an ionizing effect. Thus, new germicidal ions are being formed continuously. An antibacterial coating based on commercial nano-silver may initially give demonstrable results. However, in most cases the antimicrobial action weakens after only a few weeks.

Drastic Reduction of Germs

Unlike antibacterial agents that only combat bacteria (pneumococci, staphylococci, coli bacteria, methicillin-resistant *S. aureus* [MRSA]), the integrated additives are also permanently effective against algae and molds (*Aspergillus niger*). The ions attack the cells' metabolic systems and prevent them from spreading. During this process, up to 5 million germs are eliminated per hour and square centimeter.



An independent institute has confirmed the efficacy several times over.

Tested, confirmed and certified.

Since robatherm introduced antimicrobial coating, its effectiveness has been subject to long-term study, in the meantime for over ten years.

Confirmed: Efficacy remains unchanged for more than ten years

In spring 2010, the very high effectiveness against gram-positive and gram-negative bacteria and the effectiveness against mold fungi have been certified by an independent, approved testing institute. In 2020, an expert's report confirmed that the effectiveness of the antimicrobial powder coating had remained practically unaltered. Prior to the test, the samples had undergone ten years of exposure to the extract air flow of an air handling unit under real operating conditions.

A certificate keeps things on the safe side

The fact that the efficacy has been independently tested is a crucial aspect. Even though the coating's effectiveness became apparent in internal analyses, the external review and the long-term study stand for transparency and credibility.

Thus, certificates from independent institutes provide a sound basis for decision-making in comparing different housings.



Smooth surfaces make the AHU much easier to clean.

Permanently hygienic. Permanently on the safe side.

AHUs by robatherm are designed to last a long time. To be able to treat air hygienically in the long run, professional and regular maintenance is essential. Known for easy cleanability, robatherm AHUs allow for quicker and in-depth maintenance, helping operators provide permanently clean air. Thus, the antimicrobial coating offers exceptionally effective, complementary measures to maintain the existing high hygienic standards of robatherm air handling units in the long term.

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