

Idvac Develops Anti-Bacterial Vacuum Metallized Coatings For Packaging & Holographic Applications

Idvac Ltd., a world expert in advanced vacuum process know-how, has been investigating the anti-bacterial properties of some of its newly developed vacuum metallized coatings. With industry becoming more bacteria conscious, demand for products with antimicrobial protection is escalating. Over the last few years, there has been a dramatic increase in the development of products containing microbial protection. Antimicrobials are no longer added only to soaps and detergents; you can now find antimicrobial protection incorporated into bedding, sportswear, carpeting, filters, cutting boards, and even sandals.

Idvac has tested the anti-bacterial properties of single and multi-components vacuum metallized coatings using three types of organisms: *Candida albicans*, *E-Coli* and *S.aureus*. *E-Coli* is responsible for food poisoning, while *S.aureus* cause skin infection in wounds. The effect is long lasting. The metallized coatings are applied on PET film inside a standard vacuum web metallizer at fast line speed. Heavy growth rate of organisms was observed when these organisms were inoculated on uncoated plain PET film. However, the growth was inhibited on the vacuum coated PET film in a short time (see the attached graph). Idvac believes that such coatings will also prevent growth of other organisms including Fungi. The coatings can be applied on a pre embossed holographic PET films. Embossing can also be done after vacuum coating the film. This produces films with holographic appeal and functional use.

The vacuum coating process can be retrofit inside standard vacuum web metallizer without hampering the performance of the machine for aluminium metallization. The coatings can be metallized directly in vacuum onto films such as PET and OPP, thus reducing time and cost. No wet chemicals are used.

Idvac Ltd. has filed a patent application to cover wide applications for such coatings including sensors and pharmaceutical packaging. The anti-bacterial lustrous coatings add a new feature to holograms and can be used for a variety of applications.

Idvac Ltd., which is based in Manchester Science Park, England, has over 10 years experience in the hologram market and 30 years experience in advanced vacuum technology and packaging market helping leading companies in the UK, Europe, USA, and Far East to improve the image and durability of their products. The company supplies process retrofits and know how to convert standard vacuum metallizers to produce unique coatings.

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