

Antimicrobial and Antifouling coating

Microbiological contamination is a widespread issue affecting various sectors, from food packaging to the sanitization of public offices, transportation vehicles, or maintaining hygiene in production lines. One of the sectors most affected by the need to control bacterial load is product packaging.

Between 2009 and 2020, the total amount of packaging waste generated in the EU increased by 20%, and this trend is currently on the rise. The European Commission is developing a strategy for environmental protection by issuing directives and regulations aimed at reducing the impacts of this sector. In this context, so-called active packaging comes into play, defined as packaging modified with specific functionalities. The use of antimicrobial packaging, for example, allows:

- 💧 Extending the shelf life;
- 💧 Improving storage and logistics;
- 💧 Eliminating contact contamination;
- 💧 Ensuring the recyclability of the packaging.

In addition to food packaging, this aspect concerns various areas related to everyday life, such as textiles, healthcare, and naval sectors, with implications ranging from extending the product's lifecycle to reducing the use of sanitizing detergents.

However, to date, the main surface antimicrobial treatments used act by releasing the active compound into the environment when they come into contact with bacteria. Over time, this mechanism leads to the loss of treatment effectiveness and generates problems related to environmental sustainability, consumer safety, and potential bacterial resistance to the antimicrobial agent used.

HOW CROSSING CAN HELP

Our experts have patented a permanent surface treatment applicable to surfaces of various nature, from plastic materials to steel and fiberglass used in boat manufacturing. The surface treatment can be applied across different manufacturing sectors and can be formulated to be applied without altering the production lines or methods of surface treatments already used by the client.

The process of developing the technology under specific operating conditions involves analyzing the client's products and production processes, followed by an optimization phase of the formulation developed by Crossing through application tests on an increasing scale.

Contact us for more information on this and other services offered to businesses (info@crossing-srl.com).