UNIQUE NON-STICK ANTIBACTERIAL COATING

At Orfit, our R&D Team is constantly searching for ways to increase the performance of our products with the aim to provide the best possible thermoplastic materials for patient immobilization in Radiation Oncology.

Our engineers have developed a unique water-based surface coating that is antibacterial and that prevents materials from sticking to hair, skin and hardware.

All masks and sheet materials made of Efficast, Nanor and U-Plast (UON - DUON) are treated with this coating. As a result, the surface of these materials has an antibacterial effect that inhibits the growth of microbes.

The antibacterial efficiency was tested using the Japanese JIS Z 2801* method, designed to quantitatively determine the ability of antimicrobial surfaces to inhibit the growth of microorganisms or destroy them, over a 24 hour period of contact. This method is equivalent with the ISO 22196** test.

The following bacteria were put to the test and they were reduced to more than 99.997%.

- Meticillin-resistant Staphylococcus aureus (MRSA)
- Staphylococcus aureus
- Escherichia coli
- Vancomycin-Resistant Enterococci (VRE).

The results of the test prove that the surface of Efficast, Nanor and UON-DUON masks does not carry these bacteria. This effect prevents to a great extent the potential cross-contamination between masks that are stored together and helps in reducing the spread of harmful microbes in a hospital environment. All Orfit materials with non-stick coating passed biocompatibility testing according to ISO 10993***, which is a regulatory requirement.

* Tests performed by Kyoto Biseibutsu Kenkyusyo
** ISO 22196:2011 – Measurement of antibacterial activity on plastics
*** ISO 10993 – Biological Evaluation of Medical Devices
- Primary Skin Irritation study
- Delayed Dermal Contact Sensitization study
- Cytotoxicity study