+357 96 030922
info@marketpublishers.com

# Biocompatible Coatings Market Assessment, By Type [Hemocompatible Coatings, Antibacterial Coatings, Pre-Mixed Coatings (ready-to-use), Others], By Grade [Medical Grade, Food Grade, Lab Grade], By Materials [Ceramics, Polymers, Metals & Alloys, Others], By End-user [Healthcare Industry, Food & Beverage, Others], By Region, Opportunities and Forecast, 2016-2030F

https://marketpublishers.com/r/B7EE0124ED7EEN.html
Date: February 2025
Pages: 241
Price: US$ 4,500.00 (Single User License)
ID: B7EE0124ED7EEN

## Abstracts

Global biocompatible coatings market size was valued at USD 15.4 billion in 2022, which is expected to reach USD 41.2 billion in 2030, with a CAGR of 13.1% for the forecast period between 2023 and 2030. Biocompatible coating emphasizes developing coating technologies, which are required in the medical devices sector which is expected to incur major development in the coming years. With the concern of patient safety biocompatible coatings become crucial in enhancing the functionality and biocompatibility of medical devices, implants, and prominent equipment.

Biocompatible coatings are used for imparting antimicrobial activities using development of cementless hydroxyapatite (HA)-coated titanium orthopedic prostheses. Hemocompatible coatings are significantly related to thrombogenic and thromboembolic complications where the coating is applied on medical-grade materials. Hemocompatible coatings comprises of active and passive types which have their specific characteristics. Ceramic oxide coatings for biomedical purposes are extensively used for damaged bone tissue and joint replacement. Aumina and zirconia are suitable ceramic materials used, because of their unique characteristics such as excellent wear resistance and biocompatibility. The progressive drivers for biocompatible coatings materials carry enormous potential for global market and create massive opportunities to expand in different segmentation.

+357 96 030922
info@marketpublishers.com

## Growth in Hemocompatible Coatings

Hemocompatible has high tolerance with blood, which is associated to thrombogenic and thromboembolic complications induced by biomaterial surfaces. Commercial products in the market products possess inadequate hemocompatibility for application in the medical grade. Hemocompatible coating solutions are tremendously driving the medical sector in inhibiting blood coagulation on the medical device. Health-driven companies are significantly producing such effective devices using biocompatible coatings, creating huge market opportunities as the technology requires prominent usage of materials.

Surmodics's proprietary PhotoLink UV curing technology can successfully develop coatings for all medical-grade materials using light-activated chemistry that generate bonds rapidly. Their exceptional coating solutions can easily integrate into existing manufacturing systems and enhance medical device functioning. Active (heparin) and passive (non-heparin) hemocompatible coatings inhibit thrombin generation and reduce protein adsorption. The significance of biocompatible coatings can be explored in different medical devices which will open global market opportunities by introducing more innovations for such coatings.

## Biocompatible Coatings and Regulations

Rapid urbanization along with demand for hygienic products has raised concerns which is driving the market demand for biocompatible coatings in consumer and household products. Stringent regulations and government conditions on ensuring patient safety and product quality encourages to implement biocompatible coatings. Regulations by government entities have bounded medical device manufacturers to adhere stringent guidelines and provide assurance about biocompatibility before products can be approved and commercialized. Healthcare-associated infections (HAIs) can exacerbate the patient's conditions, increasing healthcare costs, prolonged mental trauma, and more severe outcomes. Global government agencies like European Medicines Agency (EMA) and U.S. Food and Drug Administration (FDA) have created specific regulations that prioritize safety in treatments and ensure manufactured medical devices should meet the biocompatibility standards. Antibacterial coatings are highly effective in combating pathogens and restricting the transmission of infections.

The rising concerns for patient safety is forcing government agencies to incorporate stringent guidelines for developing medical grade components. Applying biocompatibility

+357 96 030922
info@marketpublishers.com

standards on such devices encourages companies to generate innovative solutions to meet the regulations. Consequently, government regulations can also create huge market potential as more medical companies compete to generate effective solutions and drive innovation in achieving the imposed conditions.

Impact of COVID-19

The COVID-19 pandemic severely led to shortage of masks and healthcare products across the globe and global supply chain was prominently disrupted. The indispensable need for medical devices was serious concerns across the hospitals to provide active patient treatment. Incorporation of biocompatible coatings significantly revolutionized medical applications by utilizing the technology in building more medical devices and equipment. The market for biocompatible coating using relevant materials exploded and generated excellent opportunities to gain experience in various medical segmentation. The pandemic time was a boom for medical industries by increasing requirement of biocompatible medical devices which has created immense potential for building devices that biocompatible norms must regulate. This has taken the biocompatible coating industry to the utmost level of revenue generation.

Impact of Russia-Ukraine War

The annexation of Russia on Ukraine has sparked global health crises which led to enormous decease, displacement of people, and lack in sufficient funds to support people affected from the war. Despite the prevailing difficulties, aid from other neighboring and developed countries such as medical devices, useful medicines, etc. has significantly became crucial for Ukraine. The demand to fulfill the needs has increased the production of biocompatible medical devices and food packaged products which ultimately derived the biocompatible coatings market across the globe. The market opportunities have grown prominently in various health care sectors including biocompatible coatings.

Key Players Landscape and Outlook

The advancement in biocompatible coating technologies has prominently gained interest to incorporate in various medical applications such as device-based therapies, blood-contacted equipment, etc. Evonik has successfully commenced proprietary surface modification technology called Endexo, which is based on low molecular weight fluoro-oligomers which significantly assist in enhancing the biocompatibility of medical devices making direct contact with blood, tissue, and other body fluids. It possesses

+357 96 030922
info@marketpublishers.com

surface modifying characteristics that impart permanent and durable modification of surface properties without altering or impacting the device dimensions or its functionality. Surface modification using Endexo biocompatible coating technology can effectively reduce around 99% platelet adhesion and thrombus formation from blood contacting-devices such as vascular stents, catheters, etc. The importance of biocompatible coating technologies in medical applications can be recognized which has immense potential for global market to grow non-linearly.

+357 96 030922
info@marketpublishers.com

# Contents

+357 96 030922
info@marketpublishers.com



## 8. BIOCOMPATIBLE COATINGS MARKET OUTLOOK, BY REGION, 2016-2030F

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

## I would like to order

Product name: Biocompatible Coatings Market Assessment, By Type [Hemocompatible Coatings, Antibacterial Coatings, Pre-Mixed Coatings (ready-to-use), Others], By Grade [Medical Grade, Food Grade, Lab Grade], By Materials [Ceramics, Polymers, Metals & Alloys, Others], By End-user [Healthcare Industry, Food & Beverage, Others], By Region, Opportunities and Forecast, 2016-2030F

Product link: https://marketpublishers.com/r/B7EE0124ED7EEN.html

Price: US$ 4,500.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:
info@marketpublishers.com

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page https://marketpublishers.com/r/B7EE0124ED7EEN.html