

# **Biomaterials Market by Type of Materials (Metallic, Ceramic, Polymers, Natural), Application (Cardiovascular, Orthopedic, Dental, Plastic Surgery, Wound Healing, Neurological disorders, Tissue Engineering, Ophthalmology) - Global Forecast to 2025**

<https://marketpublishers.com/r/BA64D1801D2EN.html>

Date: January 2021

Pages: 299

Price: US\$ 4,950.00 (Single User License)

ID: BA64D1801D2EN

## **Abstracts**

The global biomaterials market is projected to reach USD 47.5 billion by 2025 from USD 35.5 billion in 2020, at a CAGR of 6.0% during the forecast period. Growth in this market is primarily attributed to increasing funds and grants by government bodies and universities for the development of novel biomaterials, increasing demand for implantable devices, growing demand for biomaterials in plastic surgery and wound healing applications, rising incidences of cardiovascular diseases, and rising awareness and research on regenerative medicine.

“By metallic biomaterials segment, the Titanium & Titanium Alloys segment accounted for the fastest-growing segment of the biomaterials market.”

On the basis of type, the metallic biomaterials are further segmented as Stainless Steel, Titanium & Titanium Alloys, Cobalt-Chrome Alloys, Gold, Silver, and Magnesium. The Titanium & Titanium Alloys accounted for the fastest-growing segment of the metallic biomaterials segment. These biomaterials do not show any form of toxicity or allergic reactions on contact with the body. Additionally, factors such as excellent biocompatibility, corrosion resistance, the balance of mechanical properties, and low weight stimulate the demand for titanium-based biomaterials.

“By Cardiovascular application segment, stents Catheters accounted for the largest

share of the biomaterials market”

Based on application, the cardiovascular application market is categorized into nine sub-segments— Catheters, Stents, Implantable Cardiac Defibrillators, Pacemakers, Sensors, Heart Valves, Vascular Grafts, Guidewires, and Other products. Catheters accounted for the largest share of the cardiovascular application segment due to the shift in patient preference from traditional open surgeries to minimally invasive surgeries. This trend is expected to propel the use of catheters and in turn, drive the growth of the biomaterials market during the forecast period.

“Asia Pacific: The fastest-growing region in the biomaterials market.”

The Asia Pacific region is estimated to grow at the highest CAGR in the biomaterials market during the forecast period, this is mainly due to Japan’s growing healthcare industry, increasing geriatric population, rising number of cosmetic and plastic surgeries in India, lucrative medical devices industry, and favorable tax policies in China.

“North America: the largest share of the biomaterials market”

North America accounted for the largest share of the biomaterials market. Factors such as rising biomaterials-based research, growing demand for plastic surgeries, increase in cancer incidence, and the growing number of cardiovascular diseases are contributing to the growth of the biomaterials market in the US. In Canada, market growth is mainly driven by increasing funding for biomaterials and increasing R&D activity.

### **Breakdown of primaries**

The study contains insights from various industry experts, ranging from component suppliers to Tier 1 companies and OEMs. The break-up of the primaries is as follows:

By Company— Tier 1 - 37%, Tier 2- 22%, Tier 3- 41%

By Designation— C Level - 25%, Directors - 20%, Others - 55%

By Region— North America - 40%, Europe - 27%, APAC – 20%, RoW- 13%

The biomaterials market is dominated by a few globally established players such as BASF SE (Germany), Covestro AG (Germany), Celanese Corporation

(Germany), Carpenter Technology (US), Corbion (Netherlands), Royal DSM (Netherlands), Evonik Industries (Germany), Mitsubishi Chemical Holdings Corporation (Japan), Victrex Plc (UK), Berkeley Advanced Biomaterials (US), GELITA AG (Germany), Zeus Industrial Products, Inc. (US), Cam Bioceramics (Netherlands), Solvay (US), AB Specialty Silicones (US), CoorsTek (US), CeramTec GmbH (Germany), The Lubrizol Corporation (US), Olympus Terumo Biomaterials Corporation (Japan), Xylos Corporation (US), Noble Biomaterials, Inc. (US), Dimension Inx (US), Artoss, Inc. (US), RDI Group (US), and Riton Biomaterial Co., Ltd. (China).

### **Research Coverage:**

The report segments the biomaterials market based on region (Asia Pacific, Europe, North America, and RoW), by type (Metallic Biomaterials [Stainless Steel, Titanium & Titanium Alloys, Cobalt-Chrome Alloys, Gold, Silver, Magnesium])(Ceramic Biomaterials [Calcium Phosphate, Zirconia, Aluminium Oxide, Calcium Sulphate, Carbon, Glass])(Polymeric Biomaterials [Polymethylmethacrylate (PMMA), Polyethylene, Polyester, Polyvinylchloride (PVC), Silicone Rubber, Nylon, PEEK, Other Polymers]). (Natural Biomaterials [Hyaluronic Acid, Collagen, Gelatin, Fibrin, Cellulose, Chitin, Alginates, Silk]). By application (Cardiovascular [Stents, Pacemakers, Implantable Cardiac Defibrillators, Heart Valves, Catheters, Vascular, Grafts, Guidewires, Sensors, Others]), (Orthopedic [Joint Replacement {Knee Replacement, Hip Replacement, Shoulder Replacements, Others}]), (Viscosupplementation), (Bioresorbable Tissue Fixation Products [Suture Anchors, Interference Screws, Meniscal Repair Tacks, Meshes]), (Spine [Spinal Fusion], [Motion Preservation/Dynamic Stabilization {Pedicle-based rod Systems, Interspinous Spacers, Artificial Discs}], [Minimally Invasive Fusion Surgery], [Synthetic bone grafts], [Fracture fixation devices {Bone Plates, Screws, Pins, Rods, Wires}]), (Ophthalmology [Intraocular Lens, Contact Lens, Functional Replacements of Ocular Tissues, Synthetic Corneas, Others]), (Dental [Dental Implants, Dental Bone Grafts & Substitutes, Dental Membranes, Tissue Regeneration Materials]), (Plastic Surgery [Soft Tissue Fillers, Craniofacial Surgery]), (Wound Healing [Wound Closure Devices {Sutures, Staples}], [Surgical Hemostats], [Internal Tissue Sealant], [Adhesion Barriers], [Hernia Meshes]), Tissue Engineering [Scaffolds For Regenerative Medicine, Nanomaterials For Biosensing Applications, Tailoring of Inorganic Nanoparticles], Neurology [Shunting Systems, Cortical Neural Prosthetics (CNP), Hydrogel Scaffolds for CNS Repair, Neural Stem Cell Encapsulation], (Other Applications [Drug Delivery Systems, Gastrointestinal Applications, Bariatric Surgery, Urinary Applications]). The report also provides a comprehensive review of market drivers, restraints, opportunities, challenges and trends in the biomaterials market.

### **Key Benefits of Buying the Report:**

The report will help the leaders/new entrants in this market with information on the closest approximations of the revenue numbers for the overall market and the sub-segments. This report will help stakeholders understand the competitive landscape and gain more insights to better position their businesses and plan suitable go-to-market strategies. The report also helps stakeholders understand the pulse of the biomaterials market and provides them information on key market drivers, restraints, challenges, opportunities and trends.

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