



## PEEK biomaterials handbook

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Kurtz, Steven M. (1968-)

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Electronic books

Monografía

PEEK biomaterials are currently used in thousands of spinal fusion patients around the world every year. Durability, biocompatibility and excellent resistance to aggressive sterilization procedures make PEEK a polymer of choice, replacing metal in orthopedic implants, from spinal implants and hip replacements to finger joints and dental implants. This Handbook brings together experts in many different facets related to PEEK clinical performance as well as in the areas of materials science, tribology, and biology to provide a complete reference for specialists in the field of plastics

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**Mención de serie:** Plastics design library

**Nota general:** Two columns to the page

**Bibliografía:** Includes bibliographical references and index

**Contenido:** Front Cover; Dedication; Series page; Peek Biomaterials Handbook; Copyright; Contents; Foreword; List of Contributors; Chapter 1 - An Overview of PEEK Biomaterials; 1.1 - Introduction; 1.2 - What Is a Polymer?; 1.3 - What Is PEEK?; 1.4 - Crystallinity and PEEK; 1.5 - Thermal Transitions; 1.6 - PEEK Composites; 1.7 - Overview of This Handbook; References; Chapter 2 - Synthesis and Processing of PEEK for Surgical Implants; 2.1 - Introduction; 2.2 - Synthesis of PAEKs; 2.3 - Nomenclature; 2.4 - Quality Systems for Medical Grade Resin Production; 2.5 - Processing of Medical Grade PEEK 2.6 - Machining 2.7 - Summary; Acknowledgments; References; Chapter 3 - Compounds and Composite Materials; 3.1 - Introduction; 3.2 - What Is a Composite Material?; 3.3 - Additive Geometry, Volume, and Orientation Effects; 3.4 - Preparation of Materials; 3.5 - Processing to Make Parts; 3.6 - Biocompatibility of CFR PEEK; 3.7 - Summary and Conclusions; References; Chapter 4 - Morphology and Crystalline Architecture of Polyaryletherketones; 4.1 - Introduction; 4.2 - Chain Architecture and Packing; 4.3 - Crystallization Behavior; 4.4 - Characterization Techniques 4.5 - Structure

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