When you use BlackArmor®

Engineered and manufactured by icotec in Switzerland

High-strength, nonmetallic biomaterial for load-bearing implant applications

BlackArmor® Composite Material Technology

• Over 15 years material experience from more than 20,000 clinical applications in spine care
• High-performance composite material through utilization of endless carbon fibers in a PEEK matrix
• Unique, interwoven 3D fiber architecture throughout the implant, for unmatched strength in complex designs such as pedicle screws, VBR systems, and anatomical bone plates
• Nonmetallic nature of biomaterial minimizes risk of patient metal allergy; no metal ion release
• Radiolucent in all diagnostic imaging modes (X-ray, CT, MRI) and will therefore not create imaging artifacts

Technical Information

BlackArmor® Material from the leader in medical Carbon/PEEK composites
A Million Carbon Fibers

• Carbon fibers are the backbone of modern high-tech composites
• Aircrafts are getting lighter, yet stay strong and safe
• Formula 1 drivers are well protected by the strength of carbon fibers
• Carbon-fiber-reinforced PEEK implants possess the strength of metals without compromising imaging

icotec Technology

• Injection Molding CFM (Composite Flow Molding), a manufacturing process originally developed by icotec in 2000
• Carbon/PEEK biomaterial with unique, interwoven 3D fiber architecture throughout the implant, for unmatched strength in complex shaped implant designs
• 15 years of successful clinical use in spinal applications

Musculoskeletal Applications

• icotec’s BlackArmor® composite material has been implanted in more than 20,000 cases in spine care
• Secure stabilization of the musculoskeletal system in load-bearing applications and an alternative to metal
• BlackArmor®, a radiolucent and nonmetallic biomaterial, will not create metal-like artifacts and ensures clear visualization and assessment of the anatomic structures surrounding the implant in all clinical imaging techniques (X-ray, CT, MRI)
• BlackArmor® biomaterial facilitates radiation therapy by enabling accurate delineation of anatomic structures during planning, correct dose calculation and unimpeded radiation application into the target tissue