Remove Barriers for True Insights

When you use titanium

When you use BlackArmor®





Engineered and manufactured by icotec in Switzerland



ico pet

icotec ag

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

Technical Information

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

BlackArmor[®] Composite Material Technology

- High-performance composite material through utilization of endless carbon fibers in a PEEK matrix
- Interwoven 3D fiber architecture throughout the implant
- Radiolucent in all diagnostic imaging modes (X-ray, CT, MRI)
- Embedded tantalum markers ensure the required radiologic visibility of the implants during surgery and follow-up



BlackArmor[®] Material

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A Million Carbon Fibers

- Carbon fibers are the backbone of modern hightech composites
- Aircrafts are getting lighter, yet stay strong and safe
- Formula 1 drivers are well protected by the strength of carbon fibers



icotec Technology

- Injection Molding CFM (Composite Flow Molding), a manufacturing process originally developed by icotec in 2000
- Carbon/PEEK biomaterial with interwoven 3D fiber architecture throughout the implant





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[®] is radiolucent 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