

Instratek Chooses Solvay's High-Performance Zeniva® PEEK For Innovative ToeTac™ Hammertoe Fixation System

Alpharetta, Ga., March 1, 2016 – Solvay Specialty Polymers, a leading global supplier of high-performance thermoplastics, announced today that its fatigue-resistant, biocompatible Zeniva® polyetheretherketone (PEEK) resin helped Instratek fabricate the radiolucent implant component of its ToeTac™ Hammertoe Fixation System. A Houston-based developer of medical devices for extremity surgery, Instratek launched the ToeTac™ single-use kit in December 2015 for the operative repair of hammertoe deformities.

“As our team investigated candidate materials for the ToeTac™ implant, we found Solvay’s Zeniva® PEEK was the only polymer that met all of our performance specifications,” said Lance Terrill, director of engineering at Instratek. “Not only was this high-performance material ideal for our clinical application, but Solvay’s comprehensive PEEK material testing package and superior customer service were also important factors in the success of this project.”

The ToeTac™ implant incorporates two threaded ends for fixation into bone. The first is a conventional bone thread, while the second is interrupted by slots that allow the implant to flex in response to insertion forces. Zeniva® PEEK’s high flexural fatigue resistance met the implant’s stringent design requirements for long-term reliability. The material also offers a modulus closely resembling that of bone to help optimize comfort and performance of the implant.

Zeniva PEEK® offers numerous advantages over implantable metals. It avoids reduction in bone density, for example, by maintaining normal stress on surrounding bone tissue. It also eliminates the risk of allergic reactions to heavy metals, and its radiolucent properties will not interfere with X-ray and computed tomography scanning procedures.

“Instratek’s ToeTac™ system is another excellent example of the ground-breaking innovation that Zeniva® PEEK is enabling today for implantable devices,” said Dane Waund, global healthcare market manager for Solvay Specialty Polymers. “This advanced material technology is only one of several in Solvay’s Solviva® Biomaterials portfolio, which offers the industry’s broadest selection of high-performance biocompatible polymers. The Solviva® line uniquely positions Solvay and industry-leading collaborators like Instratek to offer cutting-edge medical solutions from instrumentation to implants.”

The Solviva® family of biomaterials includes four distinct polymer chemistries to offer a broad and growing range of options for implantable devices used in orthopedics, cardiovascular, spine and other applications. In addition to Zeniva® PEEK, the portfolio includes Proniva® self-reinforced polyphenylene, Veriva® polyphenylsulfone and Eviva® polysulfone. All Solviva® Biomaterials can be sterilized using conventional methods, such as gamma radiation, ethylene oxide and steam. They demonstrate no evidence of cytotoxicity, sensitization, intracutaneous reactivity or acute systemic toxicity, based on biocompatibility testing as defined by ISO 10993:1. These sterilizable products are available in grades for injection molding or extrusion, as well as stock shapes for machined components.

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About Instratek

Headquartered in Houston, Instratek has been synonymous with minimally invasive surgical technologies for over 20 years. It is a global medical device company that specializes in the development, manufacturing, and marketing of leading-edge orthopaedic implants and endoscopic instrumentation for the field of extremity surgery. The company's success is driven by providing innovative medical technologies that drastically improve patients' lives while offering cost effective solutions for the extremity surgeon and healthcare facilities. For more information, visit <http://www.instratek.com>.

About Solvay

Solvay Specialty Polymers manufactures over 1500 products across 35 brands of high-performance polymers – fluoropolymers, fluoroelastomers, fluorinated fluids, semi-aromatic polyamides, sulfone polymers, aromatic ultra-high performance polymers, high-barrier polymers and cross-linked high-performance compounds – for use in Aerospace, Alternative Energy, Automotive, Healthcare, Membranes, Oil and Gas, Packaging, Plumbing, Semiconductors, Wire & Cable, and other industries. Learn more at www.solvayspecialtypolymers.com.

An international chemical and advanced materials company, **SOLVAY** assists its customers in innovating, developing and delivering high-value, sustainable products and solutions which consume less energy and reduce CO₂ emissions, optimize the use of resources and improve the quality of life. Solvay serves diversified global end markets, including automotive and aerospace, consumer goods and healthcare, energy and environment, electricity and electronics, building and construction as well as industrial applications. Solvay is headquartered in Brussels with about 30,000 employees spread across 53 countries. In 2014, the company posted pro forma net sales of close to € 12 billion, 90% of which was generated from activities where it ranks among the world's top 3 players. Solvay SA (**SOLB.BE**) is listed on Euronext in Brussels and Paris (Bloomberg: **SOLB.BB** - Reuters: **SOLB.BR**).

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Instratek, a Houston-based developer of medical devices for extremity surgery, chose Solvay's biocompatible Zeniva® polyetheretherketone (PEEK) resin to fabricate the radiolucent implant component of its innovative ToeTac™ Hammertoe Fixation System for the operative repair of hammertoe deformities. Photo courtesy of Solvay Specialty Polymers.