

## Solvay's Radel® PPSU Utilized in Micro-Diameter Variable Flexibility Medical Tubing

*Vention Medical's Variable Flexibility Micro-Tubing for Catheter-Based Devices Capitalizes on PPSU's Strength, Stiffness, and Melt Processability*

**ALPHARETTA, Ga., February 11, 2014** – RiverTech Medical, a Vention Medical Company, based in Chattanooga, Tenn., has developed precision micro-tubing with variable flexibility for catheter-based medical devices. The micro-tubing offers two to three different stiffnesses and flexibilities within one tubing component for catheter-based medical device procedures such as angioplasty, stent placements, and thrombectomy.

There is a significant need for varying stiffness in catheter designs to allow for optimum flexibility while maintaining the stiffness required to track the catheter to its desired location. In order to achieve ideal performance and processing, the product is comprised of a layer made of Radel® polyphenylsulfone (PPSU) resin from Solvay Specialty Polymers.

The flexible precision micro-tubing is made with RiverTech Medical's proprietary film cast technique which results in small-diameter, thin-walled parts with tight tolerances. The film cast process offers advantages over traditional extrusion by achieving inside diameters down to 0.004 inches (0.01016 cm), outside diameter tolerances as tight as  $\pm 0.0003$  inches, and wall thicknesses as small as 0.0005 in (0.00127 cm). This tubing design is built of multiple layers of different polymers and a layer of woven wire material to provide reinforcement for the tubing wall. A fluoropolymer-based material is used for the inner tubing liner to produce a low-friction surface, and a softer thermoplastic is interspersed among the wire reinforcements for flexibility. Solvay's Radel® PPSU is often used to provide strength and stiffness as the 0.002-in (0.00508-cm) thick top layer. The high-performance medical-grade polymer delivers strength and melt processability that is comparable to competitive materials like polyimide.

Radel® PPSU is a super-tough thermoplastic with high heat resistance, exceptional hydrolytic stability, and excellent chemical resistance. It can withstand over 1000 cycles of steam sterilization without significant loss of properties. Radel® PPSU is also compliant with ISO 10993-1 for limited exposure, non-implantable applications.

Solvay Specialty Polymers is a global leader in the development of sulfone polymer technology, launching Udel® polysulfone nearly 45 years ago. In addition, Solvay's experience as a reliable materials supplier in the healthcare field spans more than 25 years. The company is a leading manufacturer of healthcare plastics, offering a broad range of high-performance medical-grade plastics for devices, instruments, and equipment. Solvay also offers a family of Solviva® Biomaterials for use in a range of implantable devices.

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### About RiverTech Medical

RiverTech Medical, a Vention Medical company based in Chattanooga, Tenn., is a supplier of micro-diameter / thin-wall tubing for the medical device industry. The company, has decades of experience in the manufacturing of polyimide tubing for medical devices. RiverTech believes in establishing long-term partnerships with customers, while supplying a quality product at a competitive price with fast delivery. The company has established key processes around both full-scale manufacturing runs and short trial runs. For more information, call (423) 648-7838 or visit [www.rivertechmed.com](http://www.rivertechmed.com).

### About Solvay Specialty Polymers

Solvay Specialty Polymers ([www.solvayspecialtypolymers.com](http://www.solvayspecialtypolymers.com)) is a leading global supplier of high-performance thermoplastics for permanent and prolonged exposure implants and limited exposure devices. The company has expanded its focus on the healthcare industry to meet the growing needs of its global customers by providing global technical and regulatory support. Solvay is building on its 25-year history as a key material supplier in the healthcare field, devoting considerable new resources to help customers be more efficient and cut costs. Metal-to-plastic replacement remains a key focus for manufacturers, but increased cost pressures pose a new challenge as the market continues to grow at a double-digit pace. Solvay also continues to devote considerable research and development activities to polymer technology and commercialization of new and unique material options for medical OEMs and processors.

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 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 and Cable, and other industries. Learn more at [www.solvay.com](http://www.solvay.com).

Solvay ([www.solvay.com](http://www.solvay.com)) is an international chemical Group committed to sustainable development with a clear focus on innovation and operational excellence. It is realizing over 90% of its sales in markets where it is among the top 3 global leaders. Solvay offers a broad range of products that contribute to improving quality of life and the performance of its customers in markets such as consumer goods, construction, automotive, energy, water and environment, and electronics. The Group is headquartered in Brussels and its companies, which employ about 31,000 people in 55 countries, generated EUR 12.7 billion in net sales in 2011 (pro forma). Solvay SA is listed as **SOLB.BE** on NYSE Euronext ([www.euronext.com](http://www.euronext.com)) in Brussels and Paris. Bloomberg ([www.bloomberg.com](http://www.bloomberg.com)) = **SOLB.BB**. Reuters ([www.reuters.com](http://www.reuters.com)) = **SOLB.BR**.

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