Solvay's Radel PPSU Replaces Acetal in Quick Coupling for Surgical Sterilization Unit

ALPHARETTA, Ga. – LinkTech Quick Couplings, a leading global supplier of quick couplings and valves based in Ventura, Calif., has expanded its product line, offering a new quick coupling made of Radel® polyphenylsulfone (PPSU) resin from Solvay Specialty Polymers USA, LLC, for surgical sterilization units. The new product made of Radel PPSU is more chemically resistant than those made of acetal while also boasting reduced maintenance and extended service life.
The quick coupling is an external component that is used to quickly connect/disconnect a hose to transport sterilization solution from a tank/reservoir to the sterilization machine. The new quick coupling consists of a body, internal valve, and end termination which are injection molded of Radel PPSU and then assembled with automation equipment and ultrasonic welding. "We chose Radel PPSU as our primary material for these new couplings because of its superior strength, high thermal capabilities, chemical resistance, and ability to be molded with very low draft angles for cylindrical sealing surfaces without parting lines," said Dodge Juhan, engineering manager for LinkTech Quick Couplings.

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. It is inherently flame retardant and is resistant to bases and other chemicals. Radel PPSU is also compliant with ISO 10993-1 for limited exposure, non-implantable applications.

Previously, quick couplings made of acetal suffered from chemical attack as sterilization solution became entrapped in exposed O-rings and standard shut-off valves. Chemical attack and O-ring damage was the primary cause of frequent and costly maintenance. In addition, entrapped sterilization solution would enter air passages and permanently damage surgical devices.

Thanks to Radel PPSUs broad processing window, LinkTech Quick Couplings was able to design a cylindrical sealing surface without a parting line and virtually no draft. This permitted the relocation of the sealing O-ring to the mating socket, creating a tightly-sealed system and eliminating a very expensive maintenance headache for the customer.

Radel PPSUs ability to be molded to tight tolerances allowed LinkTech to design a unique, non-restrictive zero-inclusion automatic shut-off valve to prevent harsh sterilizing solution from entering surgical device air passages and causing damage to the device.

Another key material advantage was the ability to mold a smooth sealing surface for leak-free through-hole mounting, utilizing the companys exclusive gasket seal technology. Radel resin can also be colored to provide users with an identification

method to insure proper product connections.

The quick couplings are specially designed for surgical sterilization equipment and are being sold to leading Fortune 100 equipment manufacturers.

Solvay Specialty Polymers is a global leader in the development of sulfone polymer technology, launching Udel® polysulfone nearly 45 years ago. In addition, Solvays experience as a key materials supplier in the healthcare field spans more than 20 years. The company is a leading manufacturer of high-performance plastics, offering a broad range of materials for healthcare instruments and medical devices. More recently, Solvay has successfully introduced its line of Solviva® Biomaterials and offers them for use in a range of implantable devices.

About LinkTech Quick Couplings
Headquartered in Ventura, Calif., LinkTech Quick Couplings is a global supplier of quick couplings and valves. The company manufactures high-quality, easy-to-use quick couplings, valves, and fittings. LinkTechs product range is well suited for use in durable and disposable medical equipment, analytical devices, food and beverage, and industrial applications. For more information, call (805) 339-0055 or visit www.linktechcouplings.com [1].

About Solvay Specialty Polymers
Solvay Specialty Polymers manufactures more products with more performance than any other polymer company in the world. The company supplies over 1500 products across 33 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 & Gas, Packaging, Plumbing, Semiconductors, Wire & Cable, and other markets. Learn more at www.solvayspecialtypolymers.com [2].

Solvay [3] is an international chemical Group committed to sustainable development with a clear focus on innovation and operational excellence. Its recent acquisition of specialty chemicals company Rhodia [4] created a much larger player which 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 its customers' performance in markets such as consumer goods, construction, automotive, energy, water and environment, and electronics. The Group is headquartered in Brussels and its companies employ about 30,000 people in 55 countries and generated EUR 12 billion in sales (pro forma) in 2010.

Posted by Sean Fenske, Editor-in-Chief, MDT

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