



Solvay's Radel[®] PPSU Outperforms Competitive Thermoplastics, Enables ELITechGroup to Upgrade Two Slide Stainer Carousels

Radel[®] PPSU's superior chemical resistance, transparency and compatibility with ultrasonic welding make it the material of choice for demanding diagnostic tool applications.

ALPHARETTA, Ga., March 24, 2015 – ELITechGroup Biomedical Systems, a leading global manufacturer and distributor of in vitro diagnostic equipment and reagents, chose Solvay Specialty Polymers' transparent Radel[®] polyphenylsulfone (PPSU) resin to injection mold two redesigned carousels for its industry-leading Aerospray[®] slide stainer systems used for hematology and microbiology applications. Radel[®] PPSU delivered superior chemical resistance, exceptional toughness, the ability to withstand repeated steam sterilization and greatly expanded design options vs. competitive materials due to its compatibility with ultrasonic welding.

ELITechGroup had traditionally used a transparent polycarbonate (PC) resin to mold the tops and bottoms of its 12- and 30-slide carousel designs, as well as the thermoplastic caps that retain magnets in each carousel. However, PC frequently exhibited crazing and cracking after repeated exposure to the harsh chemicals common to slide-staining applications. To amend this, the company set out to redesign its carousels by sampling several alternative transparent materials to mold the carousel parts, including polyethylene, polyvinylidene fluoride, polybutylene terephthalate-based blends and a copolyester material. It also sampled a competitive PPSU, before selecting Solvay's high-performance transparent Radel[®] material.

"Solvay's advanced polymer technology, materials expertise and close collaboration helped us identify Radel[®] PPSU as the clear choice for this application due to its high transparency, chemical resistance, autoclavability and physical toughness vs. competitive thermoplastics," said Jared Martineau, the designer at ELITechGroup Biomedical Systems who specified and worked with Solvay's material. "Radel[®] PPSU also enabled us to streamline assembly operations by allowing the use of ultrasonic welding to retain the magnets within the carousel."

ELITechGroup's two carousel designs integrate magnets to enable the slide stainer to detect the part's rotational position as well as the number of slide placements it has. Because the carousel and the magnet caps are both injection molded using Radel[®] PPSU, it is a comparatively simple and cost-effective step to firmly bond these parts together using ultrasonic welding.

Radel[®] PPSU is highly resistant to methanol, iodine, phenol and other chemical agents that are applied to slides via atomizing spray nozzles inside ELITechGroup's diagnostic systems. The material can also withstand repeated steam sterilization and maintain its toughness and impact resistance.

"As industry leaders like ELITechGroup innovate increasingly sophisticated diagnostic tools, they are seeking higher performance thermoplastics able to meet their design needs," said Gilbert Galon, sales development manager for Healthcare at Solvay Specialty Polymers. "Many plastics are simply unable to withstand the challenging demands of new instrument designs. Radel[®] PPSU, however, continues to deliver the design and manufacturing benefits that the medical device sector requires, and it is becoming the material of choice in a fast-growing range of next-generation applications across the global value chain."

Solvay Specialty Polymers is a global leader in the development of sulfone polymer technology, launching Udel[®] polysulfone 50 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.

Solvay experts will be on hand at the American Academy of Orthopaedic Surgeons' (AAOS) 2015 Conference (booth 3019) to discuss this and other applications, as well as Solvay's broad portfolio of solutions for the healthcare industry. AAOS 2015 is scheduled to run from March 25-27 at the Venetian Congress Center and Sands EXPO in Las Vegas.

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About ELITechGroup

A privately held multinational company that manufactures and distributes in vitro diagnostic equipment and reagents, ELITechGroup offers advanced solutions for clinical chemistry, microbiology, immunology, and molecular biology through direct sales and a distribution network encompassing more than 100 countries. ELITechGroup Biomedical Systems products are clinical laboratory instruments including a comprehensive range of slide stainers and osmometers recognized worldwide for proven performance and reliability. ELITechGroup is also the industry leader in cystic fibrosis sweat testing. For more information, visit www.elitechgroup.com.

About Solvay Specialty Polymers

Solvay Specialty Polymers (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.

As an international chemical group, **SOLVAY** assists industries in finding and implementing ever more responsible and value-creating solutions. Solvay generates 90% of its net sales in activities where it is among the world's top three players. It serves many markets, varying from energy and the environment to automotive and aeronautics or electricity and electronics, with one goal: to raise the performance of its clients and improve society's quality of life. The group is headquartered in Brussels, employs about 26,000 people in 52 countries and generated 10.2 billion euros in net sales in 2014. Solvay SA (**SOLB.BE**) is listed on **NYSE EURONEXT** in Brussels and Paris (Bloomberg: **SOLB:BB** - Reuters: **SOLB.BR**).

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Radel[®] PPSU resin's high transparency, superior chemical resistance, ability to withstand repeated steam sterilization and compatibility with ultrasonic welding led ELITechGroup Biomedical Systems to choose it over other transparent thermoplastics to upgrade two injection-molded carousels used in ELITechGroup's industry-leading diagnostic slide staining tools. Photo courtesy Solvay Specialty Polymers.