

Solvay's Radel® PPSU Delivers Improved Stress Crack Resistance in New High-Performance Impeller

Injection Molded Impellers Provide High Impact and Toughness For Blower Used in Healthcare, Industrial, and Consumer Markets

ALPHARETTA, Ga., June 6, 2013 – Radel® polyphenylsulfone (PPSU) resin from Solvay Specialty Polymers delivers high strength, toughness, and high stress crack resistance in a new high-pressure impeller developed by M.U.S. International, a leading Chinese manufacturer of high-performance miniature blowers and fans. The high-performance thermoplastic replaces competitive materials such as modified polyphenylene ethers (PPE), offering improved stress crack performance.

M.U.S. International also selected Radel® PPSU for its biocompatibility for use in a range of medical applications. The company's blowers are used in medical products such as ventilators and Continuous Positive Airway Pressure (CPAP) machines for sleep apnea patients, along with fuel cells, air sensors, packaging machines, and other industrial uses.

M.U.S. International said it plans to use Radel® PPSU for injection molded impellers for most of its range of blower products. The company has a broad offering of small high-performance centrifugal blowers based on brushless DC motors for extra-long life. They also feature hall-effect sensors, high-quality dual ball bearings, and internal temperature sensors. An impeller can operate up to 60,000 rpm in some blower products, according to M.U.S. International. The impeller's intricate design has defined features which maximize air handling and circulation.

"Radel® PPSU played a major role in improving the performance of our high-pressure impellers," said J.R. Schenk, Principal of Encinitas, Calif.-based Fisaga Technologies, a U.S. manufacturer's representative and technology development firm for M.U.S. International. "We were also very pleased with the level of support we received from Solvay both in the U.S. and China." The impellers and blowers are engineered in the U.S. and manufactured in China.

The injection molded impellers range in size from 34-mm to 48-mm diameters. They consist of an impeller base and a top section which is ultrasonically welded to the base.

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.

Solvay Specialty Polymers is a global leader in the development of sulfone polymer technology, launching Udel® polysulfone nearly 45 years ago.

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About M.U.S. International

M.U.S. International, based in Jiangsu, China, is a leading producer of high-performance miniature blowers and fans. The company has a standard line of blowers, fans, and drivers and also works with customers to provide customized products. M.U.S. International offers broad experience and technical expertise in the development and design of high-performance precision motors and fan assemblies for the healthcare, industrial, aeronautical, military, and consumer products fields. The company delivers unique solutions in response to customer system performance requirements, thermal constraints, mechanical interface, and cost. For information is available at www.mus-intl.com.

About Solvay Specialty Polymers

Solvay Specialty Polymers is a leading global supplier of high-performance thermoplastics for implantable and non-implantable medical devices. The company has expanded its focus on the healthcare industry to meet the growing needs of its global customers. Solvay is building on its 20-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.

As an international chemical group, [SOLVAY](#) assists industries in finding and implementing ever more responsible and value-creating solutions. The Group is firmly committed to sustainable development and focused on innovation and operational excellence. Solvay serves diversified markets, generating 90% of its turnover in activities where it is one of the top three worldwide. The group is headquartered in Brussels, employs about 29,000 people in 55 countries and generated 12.4 billion euros in net sales in 2012. Solvay SA [SOLB.BE](#) is listed on [NYSE Euronext](#) in Brussels and Paris (Bloomberg: [SOLB.BB](#) - Reuters: [SOLBt.BR](#)).

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