

Solvay Specialty Polymers Launches Industry's First Thermoformable PPSU Foam for Insulative and Structural Components Used in Aircraft Interiors

Radel® PPSU Foam Offers Better Chemical Resistance and Lower Part Manufacturing and Maintenance Costs than Traditional Core Products

ALPHARETTA, Ga., October 1, 2013 – Solvay Specialty Polymers has introduced the industry's first thermoformable polyphenylsulfone (PPSU) foam for insulative and structural components used in aircraft interiors. Radel® PPSU foam offers better chemical resistance than competitive polymer-based foams and simpler, lower-cost part manufacturing than traditional cores. Solvay will feature Radel® PPSU foam products in Booth No. 330 at the Aircraft Interiors Expo (AIE) Americas exhibition Oct. 1-3 in Seattle.

High-performance PPSU foam is based on Solvay's Radel® PPSU, a super-tough thermoplastic resin used for over 20 years in structural and decorative aircraft interior applications. Radel® PPSU meets existing and emerging safety requirements for structural and decorative aircraft interior components and is compliant with FAA regulations requiring low flammability and heat release, low smoke generation, and low toxic gas emissions.

"We've elevated our Radel® PPSU polymer technology to a new level, delivering a unique material solution that provides superior performance and cost advantages for the aircraft market," said Armin Klesing, business development manager, aerospace and composites, for Solvay Specialty Polymers.

Radel® PPSU foam is manufactured using a proprietary continuous extrusion process that creates lightweight closed cell foam with a tightly controlled cell size distribution. The process has the capability of producing densities ranging from less than 40 kg/m³ to over 200 kg/m³ (2.5 lb/ft³ to 12.5 lb/ft³). Solvay's first commercial product, Radel® R-1050, has a density of 50 kg/m³ (3.12 lb/ft³).

Compared to traditional honeycomb products, Radel® PPSU foam simplifies machining because it can be cut, bonded and formed with conventional equipment. No edge filling or surface smoothing of sandwich structures is required. Radel® PPSU foam is significantly easier to form into 3-dimensional shapes. Unlike foams based on polyetherimide (PEI), polymethacrylimide (PMI), and polyethersulfone (PESU), shapes can have a deep draw and a 90 degree angle. Due to its thermoplastic nature, Radel® PPSU foam is easily repaired and recycled.

The unique molecular structure of Radel® PPSU foam prevents uncontrolled crack propagation upon impact, offering a distinct performance advantage over other polymeric foams. It also provides superior dimensional stability in flight, excellent thermal stability and acoustic insulative properties. The material's isotropic nature imparts its high-performance properties in all directions.

Compared to PEI foam, Radel® PPSU foam has better resistance to Skydrol® aircraft hydraulic fluid as well as cleaning agents and pesticides used in cabin interiors. Unlike PMI foam, Radel® PPSU foam exceeds the fire, smoke, and toxic gas requirements for use in commercial aircraft interior applications.

PPSU foam is an excellent choice for aircraft ducting due to its strength and flexibility, and as a foam core for sidewall, ceiling and privacy panels as well as seat shells, luggage bins and radomes. Solvay is also targeting automotive, oil and gas, medical, sporting goods, and electronics applications where the continuous production process can potentially meet high-volume market needs.

Solvay Specialty Polymers is the global leader in the development of sulfone polymer technology, launching Udel® polysulfone (PSU) nearly 50 years ago. Other sulfone polymers include Veradel® PESU and Acudel® modified PPSU.

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About Solvay Specialty Polymers

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 ([SOLB.BE](#)) is listed on [NYSE Euronext](#) in Brussels and Paris (Bloomberg: [SOLB.BB](#) - Reuters: [SOLBt.BR](#)).

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