

Solvay Halar® ECTFE-based film extruded by Amcor delivers tough, transparent, frontsheets for marine solar panels developed by Solbian Energie Alternative

Alpharetta, Ga., Oct. 19, 2016 --- Solvay, a leading global supplier of specialty polymers, announced today at K 2016 (Hall 6, Booth C61) that highly transparent photovoltaic (PV) frontsheets extruded by Amcor using Solvay's Halar® 500 ethylene chlorotrifluoroethylene (ECTFE) resin have enabled Solbian Energie Alternative to develop its innovative new SolbianflexSM solar panels for marine applications.

Solbian, a leader in solar energy components for transportation, designed its panels to be integrated directly onto the boat deck, which required that they withstand not only harsh marine conditions but frequent foot traffic as well. Solbian chose Amcor's high-clarity Halar® ECTFE-based frontsheets for its light weight, durability, textured non-slip surface and resistance to abrasions and mechanical impact.

"Like any solar panel, those designed for the marine environment must be both reliable and efficient," said Wojciech Skalbani, Sales Director, Industrials, for Amcor. "Solvay's Halar® ECTFE-based resins enable Amcor's frontsheets to achieve these goals more effectively, while also offering a lighter, more cost-effective alternative to conventional glass. Our collaboration with Solvay continues to expand and enhance options for solar energy by eliminating the structural weight limitations and rigidity of glass, thereby improving the integration of PV modules into complex shapes."

Solbian designed its solar panels to help reduce battery drain and to power auxiliary electronic systems on vessels of all types. The company recognized however that, unlike panels mounted on land, shipboard solar fixtures must be more lightweight and flexible and better able to withstand the moisture and salt of the maritime environment. Few materials meet all of these requirements as well as Amcor's films made with Solvay's Halar® ECTFE.

"Together, Solvay and Amcor have developed a durable frontsheets that delivers long-lasting protection of the PV panel's sensitive cells, while supporting excellent light capture – even at lower angles of incidence," said Luca Bonci, Managing Director at Solbian Energie Alternative. "Excellent aesthetics are also important to this application, and Halar® ECTFE-based frontsheets deliver with an attractive glossy finish."

Halar® 500 ECTFE is a melt-processable fluoropolymer that can be extruded into high-clarity films. A typical 50-µm thick (0.002-in) film has over 90 percent light transmission and weighs only 84 g/m² (0.28 oz/ft²). This is in marked contrast to a sheet of identically sized, conventional 3-mm thick glass targeting the same PV applications, which weighs 7.5 kg/m² (1.5 lbs/ft²). As part of Amcor's frontsheets, Solvay's Halar® ECTFE resin offers expansive new options for significantly lowering the weight of solar panels.

Amcor's textured ECTFE-based frontsheets offer excellent resistance to abrasion, fire and ultraviolet (UV) light, as well as excellent moisture barrier properties (<1 g/m²/day). They are self-cleaning and can withstand more than 20 years of direct exposure to sunlight without significant change in properties. Combined with Amcor's primer technology, films based on Halar® 500 ECTFE form durable encapsulant films commonly used by the solar industry.

“As they demonstrated earlier this year on the Solar Impulse 2 airplane, and now with Solbian’s innovative marine PV panels, Solvay’s Halar® ECTFE films deliver reliable, lightweight protection for PV modules operating on land, sea and air,” said Thierry Baert, Global Market Manager for Films at Solvay’s Specialty Polymers Global Business Unit. “Further, as our continuing collaboration with Amcor underscores, Solvay is committed to expanding the viability and performance of sustainable solar energy sources in the most rigorous environments and applications.”

Halar® ECTFE film protected the 17,248 photovoltaic cells of the Solar Impulse 2 (Si2) aircraft’s wings, rear stabiliser and fuselage as the sun-powered aircraft circumnavigated the globe earlier this year. In addition to waterproofing the Si2’s photocells – covering 300 m² (328 yds²) – Solvay’s lightweight, flexible, high-clarity ECTFE film encapsulated them against harsh temperatures and conditions as the plane travelled over oceans, cities and deserts. Importantly, Solvay’s material enabled film thickness to be reduced to 17 microns, compared to the 26 microns of a competing film. This saved about 35 percent in weight without compromising electrical performance.

SM Solbianflex is a service mark of Solbian Energie Alternative.

® Halar is a registered trademark of Solvay.

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About Solbian Energie Alternative Srl

Founded in 2009, Solbian Energie Alternative Srl’s goal is to produce innovative photovoltaic panels in order to expand the scope of their applicability to sectors where lightweight, flexibility and efficiency are fundamental requirements. The characteristics of these flexible photovoltaic panels allow the production of energy from the sun, wherever there is a need, even in extreme conditions: marine, electric mobility, caravans, trekking and in special building-integrated architectural situations. For more information, visit www.solbian.eu.

About Amcor Limited

Amcor (ASX: AMC) applies art and science to create responsible packaging solutions that enhance the products people use in everyday life. With global leadership positions in flexibles and rigid plastics packaging, Amcor continually innovates to find new and better ways to protect essential products such as food, beverage, pharmaceutical, medical, home and personal care. Headquartered in Melbourne, Australia, Amcor employs over 29,000 people worldwide and has operations across 43 countries. For more information, visit www.amcor.com.

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-high performance 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 & Cable, and other industries. Learn more at www.solvayspecialtypolymers.com.

About Solvay

An international chemical and advanced materials company, Solvay assists its customers in innovating, developing and delivering high-value, sustainable products and solutions which consume less energy and reduce CO2 emissions, optimize the use of resources and improve the quality of life. Solvay serves diversified global end markets, including automotive and aerospace, consumer goods and healthcare, energy and environment, electricity and electronics, building and construction as well as industrial applications. Solvay is headquartered in Brussels with about 30,900 employees spread across 53 countries. It generated pro forma net sales of € 12.4 bn in 2015, with 90% made from activities where it ranks among the world's top 3 players. Solvay SA (**SOLB.BE**) is listed on Euronext in Brussels and Paris (Bloomberg: **SOLB.BB** - Reuters: **SOLB.BR**).

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Highly transparent photovoltaic (PV) frontsheets extruded by Amcor, using Solvay's Halar® 500 ECTFE resin, enabled Solbian Energie Alternative to innovate solar panels that integrate directly into a boat's deck. Solvay's lightweight, durable ECTFE resin enabled Amcor's frontsheets to offer a highly-transparent, textured non-slip surface that could withstand both harsh marine conditions and frequent foot traffic. Photo courtesy of Solbian Energie Alternative.