

Amcor Expands Availability of Lightweight, Flexible Solar Front Sheets Made from Solvay's Halar® ECTFE Resin

Durable, highly transparent Halar® ECTFE-based films offer massive weight reduction and flexibility by replacing glass in photovoltaic modules

ALPHARETTA, Ga., July 20, 2015 – Solvay Specialty Polymers, a leading global supplier of high-performance thermoplastics, announced week at Intersolar North America 2015 that films extruded from its Advanced Halar® 500 ethylene chlorotrifluoroethylene (ECTFE) resin helped enable two lightweight, yet durable photovoltaic (PV) front sheets developed by Amcor, a top world-wide supplier of films and flexible materials. Now available in the U.S., Amcor's lightweight, flexible Rayotec and Ceramis® front sheets greatly expand options for advanced solar energy applications by eliminating structural weight limitations and rigidity imposed by glass, thereby improving the integration of PV modules into complex shapes.

"Durable, lightweight performance and protection are among the key criteria for front sheets targeting today's fast-growing U.S. market for building-integrated photovoltaic applications," said Wojciech Skalbani, global sales and marketing director of technical products at Amcor. "The unique combination of performance properties provided by Solvay's Halar® 500 ECTFE resin allowed our Rayotec and Ceramis® films to meet these and other demanding requirements and deliver a competitive new solution to the U.S. solar industry."

Halar® 500 ECTFE is a melt-processable fluoropolymer that can be extruded into transparent films with widths up to 1.5 m (4.9 ft) and varying thicknesses. A typical 50- μ m thick (0.002-in) film delivers over 90 percent light transmission and weighs only 84 g/m² (2.9 oz/10.8 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 (16.5 lbs/10.8 ft²). Applied as the lightweight core material for Amcor's Rayotec front sheet, Solvay's Halar® ECTFE resin offers expansive new options for significantly lowering the weight of crystalline silicon solar panels.

Amcor also chose Halar® 500 ECTFE resin-based film as an additional protective layer for its Ceramis® PV front sheet, which targets copper indium gallium selenide (CIGS) solar panel applications. This front sheet incorporates a sensitive silicon oxide layer that provides the durable moisture barrier that's critical for long-lasting performance of CIGS panels. Halar® 500 ECTFE's excellent UV-resistance protects this sensitive layer to support the overall reliability of both the front sheet and finished CIGS panel. Further, the flexibility of Halar® ECTFE-based film vs. glass enables more efficient roll-to-roll processing of Amcor's Ceramis® front sheet.

In addition to these benefits, Halar® 500 ECTFE-based films offer very high moisture barrier properties (<1 g/m²/day) and abrasion resistance, as well as greater fire resistance, higher stiffness and lower density than competitive ethylene tetrafluoroethylene (ETFE)-based films. They are self-cleaning and can withstand more than 20 years of direct exposure to sunlight. Combined with Amcor's primer technology, films based on Halar® 500 ECTFE form durable protective laminates for encapsulant films commonly used by the solar industry.

"Solvay's high-performance Halar® ECTFE resins help industry-leading innovators like Amcor to explore new pathways for designing durable, lightweight solar modules that are more easily integrated into complex shapes," said Philippe-Jacques Leng, Solvay Specialty Polymers' global market manager for Films. "We are committed to supporting the growth of building-integrated PV applications and other solar energy markets as consumers around the globe seek more sustainable sources of energy."

Solvay's Halar® ECTFE resins and Amcor's flexible PV front sheets are both available globally.

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About Amcor

Amcor Limited is a global leader in responsible packaging solutions, employing more than 30,000 people worldwide, operating in 40 countries across 300 sites. It supplies a broad range of plastic (rigid and flexible), fiber, metal and glass packaging solutions to enhance the products consumers use in everyday life. Amcor also provides packaging-related services that help customers succeed through collaboration and innovation driven by art and science. Amcor is headquartered in Melbourne, Australia and is listed on the Australian Securities Exchange.

With 68 plants in 21 countries, Amcor Flexibles, a division of Amcor, is a market leader and the world's largest supplier of flexible packaging. We deliver innovative solutions and provide enhanced quality products for the food, beverage, pharma, personal care, medical and industrial markets. Its award winning approach towards sustainability makes Amcor Flexibles the preferred partner for customers looking for responsible film and foil solutions.

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.

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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