



## Press Release

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Premiere at solar car race in Australia

### First automotive refinish coating with bio-based hardener

- **Long-term partnership between Covestro and PPG**
- **Same high level of quality as conventional coatings**
- **Tests in extreme climatic conditions**

Electric mobility and photovoltaics play a vital role in protecting the climate and conserving fossil resources. Combining them leads to even more innovative and sustainable mobility concepts. To show that these kinds of solutions are already feasible using state-of-the-art materials and technologies, a team of around 45 young researchers has developed a solar-powered electric car. Calling themselves "Team Sonnenwagen," the students from RWTH Aachen University and Aachen University of Applied Sciences intend to enter their vehicle in the Bridgestone World Solar Challenge 2017 in Australia, probably the toughest race in the world for solar cars.

Covestro is supporting the Sonnenwagen project with materials and technical service and as a gold sponsor. The company wants to use the project to test coatings under the harsh climate conditions prevailing along the race's route. Temperatures in the Australian desert can soar to as much as 45 degrees Celsius in October, with intense UV radiation. This time of year also typically sees a high particle concentration in the air.

#### Road test: automotive coating with sustainable raw material

The most important product application is a three-layer polyurethane coating from PPG, world leaders in paints, coatings and specialty materials, and experts in automotive coatings. The coating system is particularly suited to coating body parts made of carbon fiber composites. Climate conditions have a significant impact on the top clearcoat. The Sonnenwagen uses an innovative automotive



refinish coating that contains Covestro's bio-based hardener Desmodur® eco N 7300. "Some 70 percent of its carbon content comes from biomass," explains Ulf Wentzien, global head of Industrial Marketing in the Coatings, Adhesives, Specialties Business Unit at Covestro. "This reduces the environmental footprint by around 30 percent."

"The bio-based hardener achieved the highest sustainability standards and meets both our customers' and our own requirements," says Ignasi Roig, EMEA Product Platform Manager at PPG Refinish. "The coating is to the same outstanding quality as a polyurethane clearcoat with a conventionally produced hardener."

### **Easy processing**

The two-component coating is also impressive on the practical side. In PPG's training center in Hilden, it was applied to the Sonnenwagen's bodywork parts under similar conditions to an automotive paint shop. The application can be viewed in a video, see <https://www.youtube.com/watch?v=ar0siUc7eRE>. The coating is particularly suitable for the temperature-sensitive surface of the solar-powered car as it hardens at low temperatures.

Covestro and PPG have been working together in the field of coatings development for many years now. Both partners are using the Sonnenwagen project to demonstrate the role coatings can play in sustainable mobility.

### **Tough test for solar cars**

The World Solar Challenge is considered to be the toughest race on Earth for solar cars and this year celebrates its 30th anniversary. From October 8 to 15, 2017, approx. 40 teams from all over the world will be competing in their "homemade" vehicles to win the 3,000 kilometer race from Darwin to Adelaide – without using one drop of fuel. The Sonnenwagen from Aachen will be the only German car going to the starting line in the Challenger Class this year.

Covestro has a long-standing partnership with the RWTH Aachen University. "Through our developments and this project partnership, we are committed to future mobility and aim to show that these kinds of concepts are already feasible," says Covestro's Ulf Wentzien. "At the same time, we have the opportunity to inspire and support young people at universities."

### **About Covestro:**

With 2016 sales of EUR 11.9 billion, Covestro is among the world's largest polymer companies. Business activities are focused on the manufacture of high-tech polymer materials and the development of innovative solutions for products



used in many areas of daily life. The main segments served are the automotive, construction, wood processing and furniture, and electrical and electronics industries. Other sectors include sports and leisure, cosmetics, health and the chemical industry itself. Covestro has 30 production sites worldwide and employs approximately 15,600 people (calculated as full-time equivalents) at the end of 2016.

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At PPG (NYSE:PPG), we work every day to develop and deliver the paints, coatings and materials that our customers have trusted for more than 130 years. Through dedication and creativity, we solve our customers' biggest challenges, collaborating closely to find the right path forward. With headquarters in Pittsburgh, we operate and innovate in more than 70 countries and reported net sales of \$14.3 billion in 2016. We serve customers in construction, consumer products, industrial and transportation markets and aftermarkets. To learn more, visit [www.ppg.com](http://www.ppg.com).

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More information is available at [www.covestro.com](http://www.covestro.com), [www.ppg.com](http://www.ppg.com) and <https://www.youtube.com/watch?v=ar0sjUc7eRE>.

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