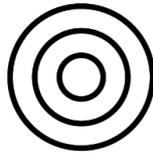


**DISCOVER  
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## Press Release

Leverkusen,  
September 12, 2019

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The new Covestro Sonnenwagen's aerodynamic design

### **Putting innovative coatings and adhesives to the test**

#### **Harsh climate conditions at the solar race in the Australian outback**

With a new solar-powered racing car, a team of 45 students from RWTH Aachen University and FH Aachen will take part in the [Bridgestone World Solar Challenge 2019](#) in Australia for the second time in October. In what is probably the toughest solar race on the planet, teams from all over the world will compete to overcome the 3,000-kilometer stretch from Darwin to Adelaide as the fastest with self-built vehicles. Also on the starting line are innovative materials from [Covestro](#), the main sponsor of this year's project.

Ultra-light cars with good aerodynamics and energy efficiency have the best chances for a good result in the solar race. The [Sonnenwagen Team](#) from Aachen spent two years fine-tuning the construction of their new speedster, paying particular attention to streamlined structures, smooth surfaces and feather-light materials.

Covestro is using the [project](#) to test different materials under the harsh climatic conditions of the track. In the Australian desert, temperatures of up to 45 degrees Celsius and intense UV radiation prevail in October. A high concentration of dust in the air is also typical for this time of year.

#### **In the field test: car paint with bio-based hardener**

The climatic conditions have above all an influence on the outer clear coat. The Covestro Sonnenwagen is furnished with a two-layer polyurethane car refinish paint system from [PPG](#), one of the world's leading paint manufacturers with special expertise in automotive coatings. It imparts a smooth, high-gloss surface to the car body and resists the harsh climatic conditions. It is also well protected



against scratches. The highlight here is the coating formulation with the bio-based hardener Desmodur® eco N 7300 from Covestro. 70 percent of its carbon content comes from biomass, which reduces the ecological footprint by around 30 percent.

“Covestro and PPG have been working together in the field of coatings development for many years,” says Markus Mechtel, Marketing Manager for Automotive Applications in the Coatings, Adhesives, Specialties segment at Covestro. “With this joint development, both partners want to demonstrate how a coating can also make a contribution to sustainable mobility.” Ignasi Roig, Product Platform Manager Refinish in the EMEA region at PPG, adds: “The biobased hardener meets the sustainability standards of our customers as well as our own. It is a near-drop-in solution where the user does not have to compromise on the quality of the coating.”

#### **Adhesive endurance test**

A wide range of materials were used to make the new car lightweight, aerodynamic and robust – high-quality plastics as well as composites and metals. The best way to permanently bond such different substrates is by gluing them together. On the trip through the Australian outback, the most important thing is the permanently high quality of the adhesive bond to withstand the high temperatures, the dryness and last but not least the vibrations during the run.

For the Covestro Sonnenwagen, the Aachen team relies on two-component polyurethane adhesives from [Sika Automotive](#), which are based on raw materials from Covestro's Desmodur® and Desmophen® ranges. The products from the SikaForce® product range feature outstanding mechanical strength along with elasticity and stretchability. Further information can be obtained [here](#).

#### **About Covestro:**

With 2018 sales of EUR 14.6 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 16,800 people (calculated as full-time equivalents) at the end of 2018.

*This press release is available for download from the Covestro press server at [www.covestro.com](http://www.covestro.com). A photo is available there for download as well. Please acknowledge the source of any pictures used.*



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**Forward-looking statements**

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