**DSM and TeXtreme® helping Nuna7 to Win the World Solar Challenge**

**Borås, Sweden, 4th of October 2013**

Next Sunday October 6th, the 2013 World Solar Challenge will start in Darwin, Australia. The Nuon Solar Team has been working around the clock to make the final preparations, and is determined to win the race with their Nuna7 solar vehicle. The unique lightweight design of the Nuna7 has been made possible by the close collaboration of DSM with Oxeon, makers of TeXtreme®. Together the companies proposed a state-of-the-art composite system, using a sustainable styrene-free Daron® resin from DSM in combination with high-performance TeXtreme® carbon fiber fabrics from Oxeon.

DSM is the innovation partner of the Nuon Solar Team that will compete in the 12th edition of the 2013 World Solar Challenge. This solar-powered car race is held every two years, covering 3000 km through the Australian outback. The structural components of the team’s car, Nuna7, are primarily built with TeXtreme® Spread Tow carbon reinforcements.

The 2013 edition of the solar race will bring new challenges, as for driver safety reasons new race regulations require significant changes in car design. These include the addition of a fourth wheel for improving stability and a larger driver’s canopy, requiring a full remodel of the vehicle and a complete change of the construction.

A TeXtreme® 60gsm fabric using HM carbon fiber (E-modulus of 395 GPa) was used instead of a traditional TeXtreme® 76 gsm fabrics using IM carbon fibers (E-Modulus of 294 GPa). This immediately gave an increase in stiffness at the same time as reducing weight. The TeXtreme® usage also resulted in better impact tolerance. The styrene-free Daron® resin provided a further increase in stiffness of 30 % as a result of the excellent fiber-resin interaction.

The novel styrene-free Daron® resin from DSM is a high performance resin, with good thermal properties and is user friendly as no additional protection is required besides goggles and gloves during application. This is a real benefit, particularly when complex shapes have to be made. In order to achieve the maximum performance of the composite laminate, only a mild post-cure is needed, even when the laminate is very thin.

TeXtreme® Spread Tow reinforcements are a novel kind of composite reinforcement suitable when looking to reduce weight and improve mechanical properties. TeXtreme® is successfully used in Americas Cup, NASCAR, advanced aerospace applications, Formula 1 as well as sporting good applications such as bicycles, skis, golf shafts and ice hockey sticks.

The 2013 World Solar Challenge starts the 6th of October in Darwin with finish in Adelaide the 13th of October. In total there are over 40 teams from different parts of the world participating in all classes of the race. Nuon Solar Team has won four times out of the six times the team has participated in the race.

**About World Solar Challenge**

The World Solar Challenge is a solar-powered car race which covers 3021 km (1,877 miles) through the Australian Outback, from Darwin to Adelaide. The race attracts teams from around the world, most of which are fielded by universities or corporations although some are fielded by high schools. The race has a 20-year history spanning eleven races, with the inaugural event taking place in 1987. The objective of this competition is to promote research on solar-powered cars.

**About TeXtreme®**   
TeXtreme® Spread Tow reinforcements is the ultimate choice for making ultra light composites. TeXtreme® Technology is flexible and tow-size independent which enables development of optimized reinforcement solutions tailor-made for specific application needs. Utilization of TeXtreme® Spread Tow carbon fabrics and carbon UD tapes by manufacturers of advanced aerospace, industrial and sports products confirms that 20-30% lighter composite parts can be produced with improved mechanical properties and superior surface smoothness.

TeXtreme® is a registered trademark owned by Oxeon AB. Founded in 2003, Oxeon has quickly established itself as the market leader in Spread Tow reinforcements with its products marketed under the brand name TeXtreme®.

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