# EcoPaXX™, Breakthrough in polymers

Sittard, The Netherlands, 13 Jul 2009

**Highest engineering plastic performance at zero carbon footprint**

DSM Engineering Plastics has expanded further its Green Portfolio with the introduction of EcoPaXX™, a bio-based, high performance engineering plastic. The new material, which is based on polyamide (PA) 410, has been developed by DSM in recent years, and is now set to be commercialized.

Polyamide 410 is a “long-chain polyamide”. It pairs typical long-chain polyamide properties, such as low moisture absorption, with high melting point (highest of all bio-plastics) and high crystallization rate (typical for engineering plastics such as polyamide 66 and Stanyl polyamide 46). It combines the best of both worlds and is therefore suitable for many high-tech applications.

**Zero carbon footprint**

Newly-introduced EcoPaXX™ is a green, bio-based material: approximately 70% of the polymer consists of building blocks derived from castor oil as a renewable resource. Castor oil is a unique natural material and is obtained from the Ricinus Communis plant, which grows in tropical regions. It is grown in relatively poor soil conditions, and its production does not compete with the food-chain.

EcoPaXX™ has been shown to be 100 % carbon neutral from cradle to gate, which means that the carbon dioxide which is generated during the production process of the polymer, is fully compensated by the amount of carbon dioxide absorbed in the growth phase of the castor beans. According to Kees Tintel, project manager EcoPaXX™ “the carbon footprint of plastics is rapidly becoming a hot issue for Customers, therefore they really appreciate EcoPaXX™ being carbon neutral!”

**High performance**

EcoPaXX™ is a high-performance polyamide with excellent mechanical properties. It combines the benefits of a high melting point of ca. 250oC, with a high rate of crystallization enabling high productivity. The material has low moisture absorption and excellent chemical and hydrolysis resistance, which makes it highly suitable for various demanding applications, for instance in the automotive and electrical markets. A good example is its very good resistance to salts, such as calcium chloride. Because of its low moisture absorption, EcoPaXX™ will also keep good strength and stiffness after conditioning.

**Market introduction phase**

“DSM Engineering Plastics is proud to have EcoPaXX™, the “Green Performer” , in a market introduction phase. Combining unique DSM knowledge with the skills of Mother Nature allows our Customers to benefit from a new step towards a more sustainable world” says Roelof Westerbeek, President of DSM Engineering Plastics.