

Successful cooperation between Henkel and Tecnaró

## **New additives for high-performance bioplastics**

**In view of dwindling reserves of fossil resources, industry is showing growing interest in bioplastics. However, compared to conventional high-performance plastics, these have their limitations – among other things in terms of stability and strength. In cooperation with Tecnaró, Henkel has now succeeded in developing new high-performance polyamide additives based on renewable raw materials that can significantly improve the performance of bioplastics.**

The use of plastics components based on renewable raw materials is seen as the way forward in the plastics industry. Ecologically, such bioplastics are far superior to classic, petroleum-based products. The growing diversity of bioplastics applications is being accompanied by rising expectations on quality and processing characteristics. In cooperation with compounder and biopolymer specialist Tecnaró, Henkel has developed new polyamide additives that upgrade the performance of bio-based plastics.

Containing a large proportion of natural raw materials, the additives of the Macromelt brand are ideal for the production of industrial plastics. This has become possible through the use of dimer fatty acids based on natural oils (e.g. rapeseed and tall oil). Along with a general increase in the proportion of bio-sourced ingredients, the new additives also have a positive impact on the performance profile of bioplastics. Impact resistance and fiber-matrix adhesion are much improved by these additives.

Depending on the plastics formulation, the additives are capable of reducing processing temperature, in some cases considerably. This diminishes the stressing of the fibers employed, with a positive effect on stability and appearance.

By developing Macromelt polyamide technology further, Henkel is thus helping to improve the quality and usability of bioplastics and paving the way for further high-end applications.

Tecnaro is one of the world's leading companies in the biopolymer sector with its Arboform, Arboblend, Arbofill and Arboflex families of materials. Thanks to the many years of successful cooperation between Henkel and Tecnaro, tailored biopolymers and composites containing Macromelt additives are already expanding Tecnaro GmbH's broad range of biomaterials (<http://www.tecnaro.de>).

**Photo material is available at <http://www.henkel.com/press>**

Henkel operates worldwide with leading brands and technologies in three business areas: Laundry & Home Care, Cosmetics/Toiletries and Adhesive Technologies. Founded in 1876, Henkel holds globally leading market positions both in the consumer and industrial businesses with well-known brands such as Persil, Schwarzkopf and Loctite. Henkel employs about 48,000 people and reported sales of 15,092 million euros and adjusted operating profit of 1,862 million euros in fiscal 2010. Henkel's preferred shares are listed in the German stock index DAX and the company ranks among the Fortune Global 500.

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Henkel AG & Co. KGaA

**The following photo material is available:**



Henkel has now succeeded in developing new high-performance polyamide additives based on renewable raw materials.



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The fiber-matrix adhesion of bioplastics is much improved by the additives of the Macromelt brand.