

# Quattor develops polymer nanocomposites

São Paulo, April, 2009

## ***Company produces resins with distinct properties***

Quattor has been developing specialized families of polypropylene resins. One of them, known as Diya, is based on nanotechnology. This family of innovative products has new and/or differentiating functionalities for a thermoplastic resin, such as antibacterial properties, scratch resistance, ultraviolet radiation protection and flame retardant properties.

The company's portfolio already contains a commercial polypropylene resin with nanotechnology. It is used in the injection market and is available under the commercial name Diya 721. This special polymer resin has antimicrobial properties against 650 different types of microorganisms.

In a bid to increase its PP resin portfolio with nanomaterials, Quattor started other projects that are currently in the pilot phase, as described below:

For the automotive industry, Quattor has partnered with producers of polypropylene composites in two product concepts. One offers greater scratch resistance for interior finishes and the other works to reduce bacterial growth in air-conditioning systems.

A nanocomposite was developed for the plastic furniture segment, which reduces the weight of the pieces by 10%, promotes greater shine and reduces wear and tear on injection equipment.

Quattor has designed a polypropylene resin with antimicrobial properties for use in medical and hospital settings in non-textile applications, which meets the Anvisa requirements for such applications.

Other potential markets for nanostructured products are those in which flammability is a critical requirement, such as wires and cables, electronics, automotive and construction industries. Quattor's solution for these segments involves using non-halogenated flame-retardants in synergy with nanostructures. The advantages are in meeting the requirements for mechanical resistance and flammability while achieving a superior hardness/impact balance, reduced levels of additives and lower densities.

For the food industry, the greatest challenge is to increase the shelf life of food products and develop intelligent packaging that shows whether a food product has suffered deterioration in its characteristics, such as in flavor or smell. A promising alternative to increase the shelf life of products is the use of metal nanoparticles as an absorbent of ultraviolet particles.

## **About Quattor**

The Quattor petrochemical company ([www.quattor.com.br](http://www.quattor.com.br)) is a company that manufactures basic chemicals and plastics from polyethylene and polypropylene - 100% recyclable. The company is headquartered in Rio de Janeiro. Quattor is a domestic company founded in 2008 from an association between Unipar and Petrobras, each respectively holding 60% and 40% of the company's capital.

The company has ten production units and 13 production lines of basic and intermediary petrochemicals and resins, located in four sites in the states of Rio de Janeiro, São Paulo and Bahia, and is listed among the 20 largest companies in the country with annual earnings estimated at R\$ 9 billion. With around 1700 direct employees, it operates in the first and second generations of the petrochemical chain. Quattor produces 2.8 million tons of basic chemicals and 1.9 million tons of resins (polyethylene and polypropylene) annually.

The name Quattor was inspired on alchemy and reminisces of the four elements of nature: water, earth, fire and air. The combination of these four powers with the human element - employees, clients, community and partners - translates into a formula for success for the new generation of the petrochemical industry, in perfect synch with the environment.

## **MORE INFORMATION:**

### **In Press Assessoria de Comunicação**

Customer service Arlete de Oliveira - 11-3323-1562 / 11-9624-2886

[arlete.oliveira@inpresspni.com.br](mailto:arlete.oliveira@inpresspni.com.br)

Taciana Tortorella - 11-3323-1563 / 11-7692-6450

[taciana.tortorella@inpresspni.com.br](mailto:taciana.tortorella@inpresspni.com.br)

Coordination Lia Mara Sacon - 11- 3323-3783/ 11-8999-0048

[lia.sacon@inpresspni.com.br](mailto:lia.sacon@inpresspni.com.br)