

New Evonik development: Adhesive-free plastic-rubber composites with PPA

October 14, 2009

Evonik manufactures a line of compounds specially modified for the production of adhesive-free plastic-rubber composites. The company presents the newest development in this area, adhesive-modified polyphthalamide compounds (PPA), at this year's FAKUMA in Hall A4, booth 4117.

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Using the adhesive-free plastic-rubber process the additional process steps for applying the adhesives, protective measures against emissions of the usual solvents and their environmentally correct disposal are obviated. The heat-stabilized PPA compounds VESTAMID® HT*plus* R1033, that is 30 % glass fiber-reinforced, and VESTAMID® HT*plus* R1035, containing 50 % glass fibers, are the newest adhesive-modified polymers for this process patented by Evonik. These compounds are especially for manufacturing parts subjected to high temperature. Compared with PA 66 and PA 612, VESTAMID® HT*plus* features also higher strength and stiffness, especially in contact with moisture, a high long-term heat resistance up to 150°C (ISO 2578), and a low tendency to creep. Due to higher heat deflection temperature of PPA compared to PA 612 it is possible to vulcanize also thin thermoplastic parts together with rubber up to 200°C without any deformation of the plastic part. Suitable rubbers for the bonding with VESTAMID® HT*plus* are FPM, HNBR, AEM and ACM.

In addition to the above mentioned PPA compounds stable, permanent bonds to suitable rubber blends can be produced without special pre-treatment using special compounds of the series VESTORAN® (polyphenylene ether) and VESTAMID® (polyamide 612) and TROGAMID® blends based on polyamide 6-3-T.

Company information

Evonik Industries is the creative industrial group from Germany which operates in three business areas: Chemicals, Energy and Real Estate. Evonik is a global leader in specialty chemicals, an expert in power generation from hard coal and renewable energies, and one of the largest private residential real estate companies in Germany. Our strengths are creativity, specialization, continuous self-renewal, and reliability. Evonik is active in over 100 countries around the world. In its fiscal year 2008 about 41,000 employees generated sales of about €15.9 billion and an operating profit (EBITDA) of about €2.2 billion.

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Board of Management

Patrik Wohlhauser, Chairman
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