MATERIALS

BASF introduces novel UV absorber for long-lasting protection of thermoplastics

Polymer additives major BASF SE has introduced Tinuvin® 1600, a novel UV absorber that is said to provide 'extremely long-lasting' protection for high-performance thermoplastics. According to BASF, the new product has been specifically developed for the protection of thin-layer applications for exterior uses, allowing plastic sheets, films and fibres to retain their mechanical properties, colour and transparency for extended periods of time. For outdoor applications, a life expectancy of up to 20 years is claimed.

Tinuvin 1600 belongs to the class of triazines and exhibits very low volatility, excellent thermal stability and good substrate compatibility in a variety of polymeric resins, which allows very easy processing, BASF says. Its 'outstanding UV absorption capacity' results in minimal loss of optical properties for stringent weathering requirements, while its 'extremely high-performance and light-stable UV-filter' lends itself particularly well to long-term outdoor use for up to 20 years, the company claims. According to BASF, Tinuvin 1600 imparts 'far superior durability' that existing UV absorbers of other chromosphere classes cannot achieve, establishing a 'new industry benchmark'.

Tinuvin 1600 is recommended for monolithic and multi-wall polycarbonate sheets for ultra-high-durability architectural and automotive glazing applications, as well as for biaxially oriented PET films for photovoltaic, window films, displays, protective films and other long-term applications. Other resins and application areas that will benefit from the new UV absorber include PMMA laminations for very durable speciality applications such as window profiles, photovoltaic and demanding construction applications; PET and PA fibres; SAN and ASA high-performance plastics applications in construction and automotive applications; and other extruded or blown thin-film applications requiring extended UV protection.

For the third quarter ended 30 September 2011, BASF achieved sales of €17.6 billion, up 11.6% on 3Q 2010 despite the suspension of Libyan oil production and negative currency effects. The company reported growth in all geographical regions, while sales volumes were 'at the same high level' as in 3Q 2010 in almost all segments. Although demand remained at a high level, growth slowed compared with the first half of 2011, as expected; customers planned more cautiously because of the turbulence on the international capital markets, reduced inventories, and partially delayed orders in expectation of possible falling prices, BASF says. Income from operations (EBIT) before special items decreased by €249 million to around €2 billion, affected by the loss of oil revenues.

The company reports that sales grew in all segments except oil & gas. In the Performance Products segment, sales increased strongly, attributable to the inclusion of the Cognis businesses as well as to higher sales prices. Sales growth was reduced by negative currency effects and a slight decrease in volumes. Earnings grew substantially, also owing to the acquired Cognis businesses.

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Arkema adds new impact modifiers for polyamides 6 and 66 in low-temperature applications

France's Arkema has enhanced its Lotader® and Orevac® ranges of impact modifiers for polyamides 6 and 66 (PA6 and PA66) with the introduction of two additional grades. Both new additives are reported to impart flexibility and impact resistance to the polyamides at even lower temperatures than existing products, while maintaining high fluidity for good productivity.

To meet customer demand, in particular from the automotive, industrial and household markets, Arkema has developed Lotader 2200, a new acrylate-based ethylene terpolymer grade said to be specifically suited to the manufacture of PA66 components requiring excellent impact resistance at very low temperatures (such as rear-view mirrors, hubcaps, handles and lawnmower bodies). According to the company, its Lotader products are used around the world as impact modifiers in the processing of technical polymers such as polyamides, polyesters (PET, PBT) and polycarbonate.

It has also developed Orevac IM300, a grafted polyolefin grade that can be used as an additive to impart impact resistance to PA6 components. This new impact modifier offers an 'excellent compromise' between flexibility and resistance to impact and cracking at sub-zero temperatures, Arkema says.

With the addition of these latest two grades, the company believes it now offers 'one of the most comprehensive ranges' of impact modifiers on the global market, and so can meet 'the most exacting criteria' laid down by plastics processors.

In other company news, Arkema recently laid the foundation stone for a new R&D centre at its Changshu site in China. When completed in 2012, it will become the group's second such centre in Asia alongside its existing facility in Kyoto, Japan. The company says that the new Changshu R&D centre will offer both a 'geographic and a technical fit' with its other research centres around the world. It will help boost the development or adaptation of products and solutions provided by Arkema to its customers in China and South-East Asia in the fast-growing markets of new energies, cable, electronics, automotive and sports, it says. Ideally located 120 km south of Shanghai, the Changshu industrial platform is now Arkema's largest manufacturing site in the world. It represents the company's main industrial base in China. The group says it has 'firm growth objectives' in Asia, which include achieving 25% of its sales on this continent by 2015, half of which are targeted in China.

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Novosystems unveils new microgranulate colorants for thermoplastics

German liquid colorant specialist Novosystems has developed the Novopearls microgranulate line to combine 'the best features of liquid colours and conventional granulate batch material'. Novopearls is a solid material possessing the characteristics of the company's liquid colours yet making a higher degree of coloration possible and offering cost savings in comparison with conventional colour batches, Novosystems claims. The product received its launch at October's Fakuma show in Friedrichshafen.

With an average diameter of 450 µm, the spherical microgranules are formulated in a wax carrier material that is highly compatible with a wide range of thermoplastics, the company says. According to Novosystems' managing director Rainer Hoop, it has been possible for the first time to use the positive characteristics of liquid colours with higher levels of coloration, not limited to the maximum 3% filling volume of liquid colours, whilst simultaneously reducing the amount of batch material added.

Novopearls colorants are highly pigmented, dust-free and free-flowing, Novosystems says. The melting point is around 85°C, meaning that the microgranulate melts faster in the conveying screw section than the resin to be coloured. This results in rapid, streak-free dispersion of the colour in the plastic, which previously could only be achieved with liquid colours, according to the company. Because of the optimal pigment dispersion, it is possible to achieve satisfactory colouring with very low dosing levels of the Novopearls granulate – between 0.1% and 0.9%, Novosystems says. Coupled with the very small grain size of 450 µm, which facilitates accurate dosing, this can reduce colouring costs by as much as 20–30%, it claims. Novosystems offers ready-to-use colour batches, or users may tailor coloration to their particular requirements by mixing their own colours from 15–24 mono-batches.

According to the company, Novopearls exhibit 'self-cleaning' characteristics comparable to those of liquid colours, with reduced abrasion making cleaning agents unnecessary. Rapid colour changes offer savings in time and costs of up to 90%, claims Novosystems.

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A. Schulman expands range of speciality antimicrobial masterbatches, reports annual results

Ohio-based A. Schulman is expanding its range of speciality antibacterial and antimicrobial