

Ampacet stays committed to UK presence

The colour and additive masterbatch specialist shows faith in UK markets with investment at its Telford facility and its tie-up with Albis on distribution

Ampacet is the world's largest producer in volume terms of colour and additive masterbatches, producing more than 400,000 tonnes per annum. The group manufactures and operates technical centres in north and south America, Asia and Europe.

UK developments

Ampacet UK is headquartered at Telford, with colour matching, production, laboratory and administrative facilities. The site has seen considerable investment recently, with increased local capacity from a new production line, a larger mixing machine to improve efficiency, and enhanced in-house analytical expertise with the appointment of a laboratory supervisor. Site manager Julie Harte comments: "Ampacet Europe is perhaps unusual for a masterbatch facility in the analytical services it offers, including high-pressure liquid chromatography and atomic absorption spectroscopy at our regional headquarters at Messancy, Belgium."

A new air filtration system has been added to cope with the inherently dusty nature of masterbatch production. The plant's health and safety record is already excellent, as attested by winning Ampacet's Presidential Safety Award. The Good Manufacturing Practice (GMP) protocol is being implemented this year - this is a quality system covering the manufacture and testing of medical goods, pharmaceuticals and foods. General quality assurance certification is to ISO 9001 (certified 2009).

Ampacet UK offers a 24-hour turnaround on masterbatch deliveries from stock at Telford, or 48 hours from the group's European distribution centre at Messancy, Belgium.

Distribution partnership

Albis UK was appointed an Ampacet distributor in April 2009, adding to an earlier

distribution agreement with Albis covering Germany, Austria, Switzerland, Benelux and the Nordic region. The Ampacet UK team is especially enthusiastic about the collaboration, given that Albis specialises in the distribution and compounding of engineering resins, serving over 1,000 customers in the UK. Albis is particularly strong in the injection moulding sector complementing Ampacet's traditional expertise in masterbatches for blow-moulding, especially for packaging applications.

Ampacet points to Albis UK's impressive infrastructure, based at the company's head office and distribution hub in Knutsford, Cheshire. This carries an extensive stock of commodity and speciality polymers and manufactures speciality compounds. Albis deploys five field-based UK sales professionals (with telesales support), field-based technical support engineers, and, for masterbatch activity, a dedicated product manager.

Knutsford stocks several standard Ampacet masterbatch grades, notably black, white, and an economy blue - plus other standard Ampacet colours, and has access to Ampacet's rapid colour matching service and specialist technical knowledge at Telford. Ampacet has trained 18 Albis personnel in masterbatch theory and practice. Ampacet's key account manager John Case comments: "This is a truly strategic partnership. With our masterbatches complementing Albis's polymer range, it's a genuine 'one-stop shop'."

Quick-reference colour chart

Ampacet has produced a wall chart illustrating 49 colours from its standard range for injection moulding applications in representative shades. The chart is geared especially to assisting small and medium clients, also supporting Albis and other distributors, and gives technical and legislative information in an accessible

format. Case comments: "The chart is intended to strengthen Ampacet's visibility at the local level. We aim to encourage customers to use standard colours where appropriate, rather than go immediately to custom colour matching."

Additive masterbatches

Case highlights the new Opticon range of high-concentration additive masterbatches, offered with a view to highly cost-effective solutions for end users. He comments: "Gravimetric additive feeders are not common in the UK - or, for that matter, in Europe generally. In the present climate there is relatively little investment in high-output machinery, except perhaps



Case: Global coverage with local market understanding

in the caps and closures sector. Opticon provides an attractive alternative for accurate dosing. Combination additive masterbatches are another way of keeping capital equipment costs down for customers - using multiple additives in a single masterbatch (say three components) means fewer feeders. Opticon offers a competitive advantage in film processing, where there is a trend to a greater number of thinner polymer layers. The range is also suitable for injection moulding."

Another Ampacet innovation is a high-efficiency antioxidant masterbatch that protects reprocessed or recycled polyolefins from degradation during processing, allowing blown and cast film processors to use more recycled material without detrimental effects on aesthetic or physical properties. The new masterbatch is particularly beneficial, according to



Telford HQ: Investment in production and laboratory

Shawn Lucas, development manager at Ampacet, in applications such as clear packaging films, where cost saving initiatives are driving the use of more recycled material, but gels are not tolerated. The masterbatch is also effective in repelletising operations, where it adds value by restoring thermo-oxidative stability, enabling recycled resins to perform more like virgin resin.

Film processors want to improve the sustainability of their products by replacing virgin resin with reprocessed or recycled resin, says Lucas. Processors are also running their lines faster and at higher temperatures. This combination of demanding processing conditions and materials that are more prone to degradation can result in cross-linking and gels. Ampacet's high-efficiency antioxidant masterbatch solves this problem by boosting the thermo-oxidative stability of recycled material. Because the antioxidant protects against degradation, gel formation, and yellowing, processors can downgrade and/or use higher recycled content while maintaining film properties.

Ampacet's antioxidant masterbatch can typically be used at low let-down ratios of 0.5-1%. For example: "In blown film processing for a high-clarity application, adding 0.5% of the masterbatch reduced gels and allowed re-use of edge trim and scrap at up to 10% without any detrimental effects on physical or optical properties."

Ampacet North America has introduced "CrystalClear PET UV" additive masterbatch, soon to be available in Europe, with a view to allowing bottle moulders and sheet processors to offer brilliantly clear, non-yellowed packages with superior UV protection that preserves colour, flavour and nutritional value.

CrystalClear has been compounded for performance, clarity and cost effectiveness, says Ampacet. Optimum UVA performance, reported to be 75% more effective than current UVA products for PET, is achieved at lower cost since less than half the amount of UV additive is required, according to the company. For a standard bottle application, a let-down ratio of 0.5% to 1% is

recommended (dependent on actual bottle thickness). A comparison study demonstrates that CrystalClear additive reduces the cost per pound by as much as 40% as against standard PET UV absorbers.

Ampacet's established additive masterbatch range embraces a wide range of polymers, including PE, PP, PS and EVA. Particular specialities are antifogging masterbatches for PE and BOPP films - "Hydroclear" is Ampacet's market-leading BOPP antifog range, used, for example, in consumer food packaging to keep a salad visible without condensation inside its wrapping.

A wide range of technically advanced additives is offered; other active agents include anti-gloss and matting agents, antimicrobials, antislip agents, antistatic agents, flame retardants, laser marking promoters, optical brighteners, organoleptic control agents, slip agents, UV absorbers and UV inhibitors.

End markets

Case outlines Ampacet's broad spread of markets: "The group's roots were in commodity and speciality white masterbatches. We are particularly associated with the flexible packaging sector, but are seeing increasing sales for rigid packaging. Working with the major oil companies has proved an interesting learning curve, with many challenges - but our work has demonstrated a good cultural fit, with Ampacet understanding the companies' business aspirations."

"The food packaging market often requires lower volumes for specialist products, and of course regulatory compliance is crucial here. The consumer personal care sector is naturally more fashion-dependent, and Ampacet partners Unilever and Procter & Gamble on colour trend analysis."

Case concludes: "We at Ampacet UK benefit from the group's philosophy of global masterbatch coverage coupled with local market understanding. We are always close enough to our clients to provide all the services our markets have come to expect."



Colour at Telford: Custom matching and small batch production