

Bio-based polyester seen as replacing ABS and polycarbonate

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US bioplastics producer Telles, a joint venture between Metabolix and Archer Daniels Midland, has joined forces with injection moulder Nypro in the development of its latest material.

Mirel P1003 replaces both P1001 and P1002 with a single grade suitable for a wider range of applications. It is a bio-based semi-crystalline polyester (PHA) which Telles says is tough, durable, and heat resistant, making it a suitable replacement for materials such as ABS and polycarbonate. Other attributes are improved processability, improved flow, faster cycling than other biopolymers, and an overall cycle time similar to traditional thermoplastics, says Telles.

Nypro anticipates using P1003 for components of business machines and consumer electronics products.

Also new from Telles is an agreement with Teknor Color Company to develop a range of colour concentrates for use with Mirel. They are formulated using Mirel base resins and meet ASTM D6400 and EN 13432 standards for compostability and biodegradability.

The new Mirel colorants are designed for use in injection moulding, sheet, film, and thermoforming applications. Colours are currently being used in the Mirel injection moulding grade for laboratory material handling trays, and several colours have been developed for use in consumer retail products. In addition, a black concentrate is currently being used in the Mirel film grade for agricultural mulch film field trials.