

# Degradable films from CPS Flexible

CPS Flexible, the Leicester-based flexible packaging specialist, is now manufacturing degradable polyethylene and polypropylene films.

"As it is generally uneconomical to recycle printed films, they end up in landfill," says CPS's commercial director Jonathan Woodcock. "Now, customers can take active steps to reduce their environmental impact by using our degradable film. Customers are keen to take it up and our first commercial run was delivered in December for IPC Media.

"There is no compromise in functionality, including strength, clarity, barrier properties, sealability or print, and we can convert the film in the usual way," continues Mr Woodcock. "It is suitable for food packaging and, most importantly to our customers, we are offering it at no extra cost."

Using technology developed by Borehamwood-based Sympany Environmental, the film works through the inclusion of a special additive in the extrusion process, which breaks down the carbon bonds, caus-

ing embrittlement. The breakdown is accelerated by heat, light and stress. According to CPS, the film eventually becomes biodegradable and its final products are H<sub>2</sub>O, CO<sub>2</sub> and a small amount of biomass. The film has been tested for accelerated weathering and oxidation induction by RAPRA, an independent European plastic research centre. Migration tests certify it safe for direct food contact, while chemical elements have been successfully tested for soil safety and eco-toxicity. CPS says it has also



undertaken tests to ensure the film retains its integrity for its normal shelf life, and that it will run successfully on packaging machinery.

For more information, go to [www.degradable.co.uk](http://www.degradable.co.uk).

# Margins for growth



CPS Flexible is now producing PE and PP degradable films at no extra cost to customers

## In a tough market for flexible converters, Paul Gander looks at some healthier growth areas, from produce films to degradable polymers

European flexible packaging producers may be forever improving the protection they offer to fresh and longer-life foods, but when it comes to protecting their own markets and margins, the picture is not so rosy.

In a recent market study, Pira International put the UK at the top of the European Flexible packaging league in terms of consumption. It predicted that this national market would continue to use more flexibles even than Germany, giving the UK a 21.6 per cent share of the European market by 2010.

Unlike some other forms of packaging, flexibles are relatively easily and cheaply transportable. Asian and Indian converters, as well as countries such as Turkey, have been posing an increasing challenge to their European counterparts on quality as well as price. So it is hardly surprising that the UK's status as leading consumer is not reflected by production volumes inside the country.

Martin Urwin, director of the UK's Flexible Packaging Association believes most applications in flexibles are "fairly stagnant" for UK materials producers. These markets are also dominated by a small number of high-volume converters, he says. Indeed, the figures for the UK industry make pretty bleak reading: a five per cent return on investment and average margins of just two per cent. "That's an average," Mr Urwin points out. "I estimate that half our members are currently only breaking even or making a loss." But he sees some light at the end of the film-roller. "There are major growth areas in fresh and extended shelf-life applications." Films used in conjunction with modified atmosphere (MAP) play a significant part in this market.

### Low added value

Yet there is a downside even to this encouraging news. Mr Urwin explains: "Unfortunately, this type of application doesn't add much value for a converter, typically using just two- or three-colour print." Converters specialising in this area range from the likes of Amcor Flexibles to smaller players such as Paragon Packaging, he says.

As Mr Urwin suggests, the image of packaging for the produce sector is relatively low added-value and low-tech. In fact, says Amcor's European market director for produce Phil Downey, films for the sector are very specifically tailored and in continual evolution. The retailer and consumer, rather than the converter, are likely to benefit most from the science of optimising the atmosphere inside a pack and, by implication, the shelf-life of the product.

Converters such as Courtaulds Films first began applying microperforations to films for fresh produce some 15 years ago, says Mr Downey. But the rate at which a product respire, and

so needs fresh oxygen, varies according to the nature of the crop and the amount of cut surface area that is exposed.

Hence, films need to be tailored to expel the right amount of CO<sub>2</sub> out of a pack, and allow the right amounts of oxygen in. With products such as new potatoes, says Mr Downey, these properties can vary between the beginning and end of the season. They can also change when the crop season shifts from one country to another. And they differ widely between one product type and another. "With some products, notably mushrooms, the issue of oxygen content combines with other problems such as moisture transmission," says Mr Downey. "And here, we're still working to develop solutions for extended shelf-life."

Amcor's PPlus range of films for MAP in produce can also benefit some cheeses. "Varieties such as Stilton, Brie and Camembert still need to breathe," Mr Downey explains. "President in France was the first brand to use these films around a year-and-a-half ago. Since then, they have also been used for Stilton in the UK." This area has good growth potential in the UK and abroad, says Amcor.

The role of flexibles in the traditionally conservative cheese market is not only in lengthening shelf-life. Consumer appeal is also vital in a sector that, for years, has been dominated by commodity hard cheeses in largely undifferentiated, basic packaging.

According to Amcor's dairy sales director Jim Graham, the

realisation that branded cheese can absorb the cost of pack innovation in its pricing has now extended to the own-label sector. "If brands can do it, why can't retailers?" he asks.

A significant market shift came recently when own-label supplier The Cheese Company began using a number of Amcor developments (see box-out below). These span use of the FlexCan easy-open and recloseable stand-up pouch for grated cheese, a tray for sliced cheese with peelable lidding over base material printed to look and feel like paper, and an easy-open and recloseable feature for block cheese.

The sector may well soon be borrowing ideas from categories other than fresh produce. Mr Graham explains that Amcor's Panorama laminate, which combines polyester and paper in strips, is currently only used for sausages. But it would also be an adequate barrier and great differentiator for cheeses, he says.

### Degradable film development

Whether for produce or other product areas, not only in food, different types of degradable films are now becoming more widely available in Europe. In the food industry, they are seen by many retailers - and often by consumers - as being a natural complement to organic fruit-and-veg ranges in particular.

The 'degradable' market divides roughly into two material types. These have recently been at loggerheads in Europe over definitions of 'degradable' and 'biodegradable', as well their relative environmental credentials. Biopolymers such as polylactide (PLA) are derived from renewables such as corn starch. As such they have certain performance limitations, and still cost considerably more than traditional plastics. But they are fully compostable and biodegradable. Alternatively, additives can be combined with polymers such as polypropylene (PP) and polyethylene (PE) to dramatically accelerate the breakdown of the plastic into fine particles. These types of material are promoted by companies such as Symphony Environmental in the UK, and are used for the Neosac carrier bag, which last year transformed the French market.

As Amcor's Mr Downey explains, the second type of degradable or 'fragmentable' film can still add a considerable premium to the overall cost. "But if some of the more mainstream film operations go for this option, it will bring it more into line with the cost of more familiar materials such as OPP," he believes.

In fact, this shift in pricing may already be under way. When small Leicester-based producer CPS Flexible expanded its capacity in extruded PE and PP, it saw Symphony-style degradable films as a major opportunity (see page 19). Now the company says it will produce degradable films across both polymers at no extra cost. "In theory, laminates could be degradable, too," says commercial director Jonathan Woodcock. "But that is for the future. For now, we are producing simple, single-layer structures."

Another UK company offering films incorporating Symphony's slogan "pro-degradable" address is Brayford Plastics. The company can supply extruded film or finished PE bags, with Beso print in up to 10 colours. Although organic fresh produce is a prime target, says Brayford, the film is especially suitable for frozen products, since low temperatures slow the process of degradation.

For its part, Amcor supplies both types of degradable film in Europe, with the PLA-type film being especially popular in some Continental markets, despite the cost. In the UK, retailers such as the Co-op source the polymer-plus-additive type of film from Amcor. "I do sense a lack of clarity about what is biodegradable and compostable," says Mr Downey. "And that's not helping growth in the sector." But ultimately, he confesses, it comes down to whether a given retailer feels one material or the other has the necessary credentials and image to satisfy consumers. And the consumer, as we know, is king.

## Premium cheese takes convenience to new levels

The Cheese Company, one of the UK's biggest cheese producers, has chosen several patented packs from Amcor Flexibles (AF) for the launch of its premium cheese range. Amcor FlexiLite, with Amcor Reclose top web lidding material, is being used for a new retailer own-label sliced farmhouse cheese. Produced at Amcor's Lund plant in Sweden, FlexiLite is a non-woven basisweb, laminated to APET/PE or PVC/PE, which captures the traditional look and feel of paper and offers product differentiation.

For its new range of individual cheese portion packs, The Cheese Company has selected easy-open, easy-tear Amcor TearStick stickpacks from the manufacturer's Colosseum site in the UK. The TearStick runs at high speeds and is produced with Fancy Cut easy-tear capability. This negates the need for a tear strip, which requires inherent line efficiency and also has high wastage constraints.

Among its existing product range, The Cheese Company already uses two of AF's patented easy-open and recloseable solutions - the EasyPack from AF Speed in France for blocked cheese and the FlexCan, produced by AF Venus in the UK, for grated cheese.

