

Light and durable packaging film technology

Manufacturers in the packaging industry can look forward to new innovative solutions from ExxonMobil and Sirane. **APN** reports on the latest market products



ExxonMobil Chemical's metallocene PE technology has made it possible for lighter weight heavy duty bags to be manufactured. The packaging industry can now shave off as much as 15% on raw material costs via these thinner, lighter weight bags, not forgetting the additional savings on storage and transportation costs resulting from the reduced weight.

The breakthrough 125 micron heavy duty bag film was pioneered by ExxonMobil Chemical. To date, the industry's prevailing thickness standard for heavy duty bag films in Asia Pacific is +/- 140 microns.

"This breakthrough lighter weight heavy duty bag film not only cut costs for manufacturers and businesses, but offers more sustainable packaging solutions so imperative in today's challenging market environment," stresses David McConville, ExxonMobil Chemical's Global PE market development manager.

Heng Kok Siong, ExxonMobil Applications Technology manager, explains the heavy duty bag down gauging challenge: "To down gauge from a heavy duty bag film of about 140 to 125 microns may not appear significant, but it is a huge challenge because the stringent requirements of high stiffness, creep resistance and drop test performance for the heavy duty bags counteract one another."

"But with the introduction of our new Enable mPE resins last year and using a special blend of Enable mPE and Exceed mPE resins, we've achieved a 125 micron heavy duty bag film that provides an excellent balance of high stiffness, creep resistance and toughness. The long chain branching in Enable mPE significantly improves bubble stability during the film blowing process which, in turn, can improve film line output by more than 10% with excellent gauge control," he adds.

After several months of intensive testing and trials to confirm the film's performance, ExxonMobil has switched completely to using 124 micron film as the standard for all its 25kg resin bags produced at its Singapore plant. Several of its customers have also converted to using the thinner high performance film,

including Nordenia, a manufacturer in the industrial and consumer packaging business in Malaysia. "We are pleased that the film run using this formulation is very stable, with excellent bubble stability and less gels in the blown bubble, which means less material wastage," says Norman Lee, general manager. He also shares that they have seen lower machine downtime and increased output of 6-7%.

Fresh innovation

Siraflex, a fully compostable, starch-based packaging film which is available in a range of styles and thickness from 30 to 200 micron and Sira-Fresh, an oven steam bag film, are two of Sirane's best selling films.

Capable of withstanding temperatures of up to 220°C, the new Sirane film offers a weight saving of over 30% compared to previous products. PET, Glassine and paper materials are involved in the material composition and the new film offers true product versatility and can be run on formfill machines, flow wrap, or converted into pouches, or bags.

Sirane director, Simon Balderson says: "I am happy to report that Sirane's innovative work has more than kept pace with the new demands posed by the credit crunch. Sales of Siraflex are going well - and Sira-Fresh will see us compete further in the 'home cook' segment of the food packaging market. The truth is that not only is our material much lighter - it also performs much better than previous bags."

He continues: "Packaging suppliers still face a very tough market with immense pressure on margins - but we see that product innovation is still vital. For various reasons there is still a tremendous need and thirst for pack innovation. More and more, for example, we are being asked to help clients really shape up to the 'less packaging' model demanded by the supermarkets, the politicians and the consumer. In truth, those packaging suppliers that can sit down and really face the new scenarios - and what the specifiers now needs - are few and far between. Happily, it's what we're in business for here. We thrive on new ideas - and our focussed goal is simply to get

the new product made."

Balderson says that product optimisation is the key word. "We have such confidence in the Sirane packaging innovation and flexibility because we have built up - say for absorbent packaging or compostable film - pretty much a unique and proprietorial toolbox of know-how. This consists of unique materials data, processability and product performance. So when we come to innovate a new pack we can save the client a great deal of time and resource, simply by predicting some fairly certain parameters in terms of materials, size, weight, shape, performance."

Word of Sirane's know-how is not just confined to leading retailers and packer-fillers. A local fish and chip outlet approached the company keen to give his customers something that would absorb the fat and grease from the take away product. Sirane was able to shape, cut and specify the right kind of absorbable insert at a price that matched the chip shop owner's budget.

Elsewhere, Sirane's innovative powers have this year led the company to supply a number of products to the Australian continent and to expansion in the USA. Its packaging has prospered and where larger orders for nationwide brands are looming. Within Europe a network of sales agents is now established. Sirane's French market remains a key to continental growth - with that country's independent producers of cheese, meat and fish driving the expansion there.

Sirane's new Dri Vac absorbent pouches are also helping the development of the meat packaging markets through the world - facilitating moves away from space consuming vacuum packed containers to shrink packaged film with Dri Vac inserts - thus preserving flavour, saving space and enabling Just-In-Time supply to retail outlets. Balderson notes that 'rightly or wrongly the retailer currently believes in offering compostable packaging to the consumer: "The public compostable infrastructure has yet to catch up - but in the meantime the option to buy compostable packaging is in place - and we are doing all we can to match that need."