EXCLUSIVE FEATURE OFFER: SHANNON SHERRY

Recycling makes more than business sense to SA food packaging manufacturers

Johannesburg, 2 November 2011 – Plastics are the material of choice for many manufacturers and will form an increasing proportion of household waste in the future.

A study by UK-based recyclers Recoup showed that if plastics were no longer used in packaging, the weight of packaging materials would rise by 300%, the volume of rubbish would expand by 150% and the energy consumed by the packaging industry would increase by 100%.

Yet the clear polymer used to manufacture durable, lightweight thermoformed or blow- and injection-moulded containers for everything from water, juice and soft drink bottles to deli and a myriad of other food containers has been the subject of much public debate of late.

As its end-products are straining the world’s landfills, writer-activist Julia Butterfly Hill best encapsulates the rising public and institutional outcry against humanity’s disposal of hardly-used plastic products in her words “when you say you are going to throw something away, where is away?”

“Every player in the massive global plastic industry has had to grapple with the environmental results of the world’s ever-increasing reliance on plastic products – perhaps more so in the fast-paced, once-off use food packaging industry,” says Chandru Wadhwani, Executive Director of internationally certified recycling plant, Extrupet.

“Once we take responsibility, we own the problem. The good news is that Polyethylene Terephthalate (PET) is 100% recyclable, and not just once. Because of its properties and durability, PET can be recycled many times over.”

Recycled PET, or rPET in industry jargon, requires far less energy to manufacture than virgin PET, as evidenced in a detailed carbon study conducted last year by UK-based recycler AWS Eco Plastics. For every tonne of food-grade rPET pellets AWS produces, 254kg of carbon dioxide and other greenhouse gasses are released into the earth’s atmosphere. In the production of virgin PET, however, 681 kilos are released per tonne.

This study illustrates that food packaging producers can offset a 63% carbon saving by simply choosing to use rPET pellets in their production line, massively reducing their carbon footprint when compared with traditional packaging manufacture. Given economies of scale, or in layman’s terms, once manufacturer and retail demand empower the recycling plant to run at full capacity, a carbon saving of 68% can be achieved.

In South Africa in 2010, 37,842 tonnes or 38% of PET was collected and recycled, out of a 142,000 tonne resin market. “Considering that only 27% of PET ordered by local manufacturers last year constituted rPET and taking into account the carbon savings illustrated by AWS, manufacturing sector acceptance of rPET requires attention,” says Wadhwani.

As industry body-contracted service agents, Extrupet along with Hosaf, Kaymac and Sen li Da combine collection, recycling and end-service products in a seamless value chain, offering the food packaging industry a cost-saving and consumer-gratifying “green” alternative at a time when impending carbon taxes, a weakening Rand and post-COP17 consumer enviro-activism will put increasing pressure on producers to redress their traditional business practices.

“While the industry certainly supports recycling by way of levies and consumer education,” says Wadhwani, “local manufacturers driven by their retail clients will need to step up their use of rPET if we
are to compete with the likes of Marks & Spencer, which uses various percentages of rPet in 84% of its food packaging.”

As the first major South African retailer to use post-consumer recycled plastic in foods packaging, Woolworths is playing a leading role in using rPET in high-end food packaging, to supplement its traditional use of Extrupet’s locally collected and recycled rPET fibre in duvets and pillows.

Supplied by packaging manufacturer, Polypet, a division of Polyoak Packaging, the 1.5 litre juice bottles, which contain up to 30% rPET, recently won two awards in the SA Plastic Recycling Organisation’s Best Recycled Product Competition.

Rowan le Roux, Sustainability Manager at Polyoak Packaging, is excited about the prospects of increasing its use of this “green” alternative to virgin materials. “The image of rPET as a contaminated and unsafe base material for the re-manufacture has shifted tremendously over the years.”

Extrupet invested R20 million into the state-of-the-art food grade recycling plant – the first globally to be certified by the British Retail Consortium for meeting food safety standards, and the only plant of its calibre in Africa.

“For Polypet, it does not only constitute good business to use Extrupet’s recycled PET, but it is a more sustainable solution for the longer term viability of our value chain, and certainly a top-quality alternative to virgin materials,” says Le Roux.

Consumers are also becoming more environmentally aware, especially when it gets to recycling and reusing. “Given Woolworths’ dedication to sound environmental policy,” says Tom McLaughlin, a packaging and sustainability specialist at Woolworths, “we fully support the eradication of stigmas of the past around recycled food packaging, because ultimately the sustainability of recycling rests with end-users. Packaging made with rPET is ecologically sound and technologically advanced, with absolutely no compromise on food safety.”

With COP17, the massively important global Climate Change Summit, being hosted in South Africa later this month into December, the world’s eyes will be squarely on the state of South Africa’s environmental practices across industries, especially through the eyes of the 6000-strong press corps in our country for the duration.

“We envision that this season of heightened environmental awareness will encourage similar manufacturing value chains to increase their adoption of recycled materials in the production process,” says Wadhwani.

“With China dominating the fibre market, the rPET food grade chip can lead to a much bigger, vibrant local recycling market. Because the SA Food and Cosmetics Act contains no specific regulations governing the reuse of polymers for food packaging, we are judged by the same rules as those for virgin packaging.”

The product also has an FDA certification of “non objectionable”, meaning that under US regulation, Extrupet’s rPET chip is of a standard high enough to be allowed back into US food packaging. Added to that, the safe collection and sorting of recyclable materials are regulated by the Waste Management Bill.

"Depending on the application, rPET blend ratios differ, where say carbonated soft drink bottles might contain 10% rPET chip, while a bottle without gas can be produced entirely from rPET. The adaptation to using more rPET in the manufacturing process is, however, a relatively simple and rapidly rewarding transition,” says Wadhwani. "Our next challenge is to encourage packaging designers to apply their creative flair with recycling in mind, something that I see happening with increasing frequency and promise."
UK-based parastatal, the Water & Resources Action Programme (WRAP) – which has already trialled the use of 100% rPET soft drink and smoothie bottles for Ribena and Innocent Drinks, commissioned sustainability experts Best Foot Forward earlier this year to test the feasibility of bottle recycling.

Interestingly, the research showed that, as the percentage of recycled PET in bottles was increased, carbon emissions decreased correspondingly, and also concluded that it is more efficient, in terms of energy and resources, to incorporate rPET in bottle manufacture than to produce the bottles using only virgin material.

Last year, South Africans threw away the equivalent of more than 4 billion used soft drink and water bottles. Only when these discarded bottles and food packaging become recycled PET and once again food and beverage containers, is the loop in the recycling chain finally closed.

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