

Recycling

How to eliminate bottled waste?

There are a multitude of terms to remember in the plastic water bottle industry and as much global contention: Oxo-degradable and oxo-biodegradable, degradable, biodegradable. According to European Bioplastics, the European organisation that represents the certified bioplastics industry, these terms are used to promote plastics that are supplemented with additives. In ongoing debate industry experts have serious concerns that these products do not meet their environmental claims.

The reason additives are used in plastic is that they affect its chemical stability and it is claimed that the additives trigger a breakdown when exposed to heat in the natural environment. Oxo-biodegradables include additional stabilisers which are added to limit the unwanted fragmentation of polymer chains while the plastic is still used by the consumer, but studies have shown that the additives lose their mechanical stability when exposed to light. Oxo-biodegradable plastics are not the result of biodegradation but of a chemical process. Hence, fragmentation is not the same as biodegradation. The resultant fragments that are broken down remain in the

environment. These fragments are believed to be a serious risk to aquatic and marine habitats according to studies conducted in the US. Oxo-biodegradable products if recycled bring their degradation additives into the recycling streams with other plastic waste. Their degradation additives pose a problem for the recycling industry as the recyclates can be destabilised leading to hindered acceptance and reduced value of recycled stock. The Oxo-Biodegradable Plastics Association (OBPA) has retaliated in turn saying that its products are superior and that European Plastics is protecting its market share. If a product is termed biodegradable, total biodegradation in less than six months must be proved and is an essential requirement for claims on biodegradability. (Biodegradable and 'compostable' are terms that are internationally established and follow ISO 17088).

A US based company Aquamatra launched a new type of PET plastic bottle in May recently. It claims it's recyclable and biodegradable, even in landfills, 'We investigated oxy-degradables, but there were "big ifs" surrounding it such as an adequate amount of exposure to sunlight for degradation which is not likely in a landfill,' said company founder and president Alexandra Tekla. Aquamatra has found Phoenix, Arizona-based ENSO Bottles, LLC, which had developed a form of polyethylene terephthalate (PET) that appeared to be both recyclable and biodegradable within 1-5 years in



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microbial landfills, in either aerobic or anaerobic conditions. South Africa has a solid vibrant recycling industry well placed in global terms. It provides employment to thousands in collection and recycling enjoying strong government support.

The Plastic Federation of SA believes that as a starting point for the plastics industry, all plastic manufacturers have the right to feedstock certainty. In South Africa OBD additives are sold on an environmental ticket, with no regard for the recycling industry. It was shown that suppliers of OBD additives were not informing their customers of possible recycling problems seducing brand owners in the absence of information. The Plastic Federation's goal is focusing on the implementation of a National Waste Management Act, requiring post consumer recyclables collection, rather like the EU Packaging Directive & Australian Covenant. They say they'll continue to work with additive suppliers and OBD product suppliers and other biodegradable product suppliers to seek common ground and solutions, establishing a Degradable Plastics Interest Group in the Federation, rather along the lines of the British Plastics Federation and Society of Plastics Industry in the USA. The British Plastics Federation says biodegradable plastics are all very well but they must be kept entirely separate from conventional plastics when it comes to recycling.

Pledges from South African giants include: Woolworths South Africa, who announced over a year ago that they were keen on biodegradable packaging but they refused to go the OBDP additive route realising it was going to

compromise the fragile recycling industry in SA and that there was no point in taking oil – a non renewable material – and making it disappear – Tom McLaughlin, 2008. Coca-Cola, ABI – the soft drink division of SAB South Africa shuns biodegradability in favour of recycling saying, 'At this stage we do not intend to introduce biodegradable additives as there is no conclusive study that shows that they do not affect material that's recycled.'

SANBWA in turn supports initiatives that benefit the environment. It feels that these products need further development and needs to fit in with what currently works in SA: extended producer responsibility through recycling. The association currently supports the SA recycling industry through its formal environmental policy that amongst other issues address post consumer recycling. This requires members to support suppliers contributing to the R250 per ton PET levy payable to Petco. SANBWA has reciprocal membership of Petco. Furthermore SANBWA members must use recycling friendly materials in labels and caps and contribute towards recycling through establishing drop-off centres for PET containers, communicating through vehicles like the 'please recycle' sign on all labels.

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RELOOK, RETHINK, RECYCLE

Each time you recycle PET bottles, you are playing a small part in a larger process. Recycling helps save large amounts of energy and reduces the demand on our natural resources by re-using products already manufactured.

Did you know?

PET plastic doesn't just make packaging more effective; it also makes packaging more efficient, helping to conserve resources?

DELIVERING MORE BEVERAGE WITH LESS

Just 32g of PET plastic can deliver 1 litre of a beverage: 128g of steel or 432g of glass would be needed to deliver the same amount.

This process of light-weighting can play an important role in boosting the environmental and economic efficiency of consumer product packaging.

PET is the type of plastic resin labelled with the # 1 code used to package bottled water, carbonated soft drinks, juice, oil, food trays and household cleaners.

- Since the formation of PETCO and the introduction of the voluntary recycling levy paid by bottlers, converters and brand owners in 2005, the tonnage of post consumer PET collected and recycled has doubled.
- More than 1.5 billion PET bottles have been recycled in South Africa to date.
- Through the programs implemented by PETCO and partners, plastics are collected, processed for recycling and then used to create second-generation products.
- Recycling a single PET bottle can conserve enough energy to light a 60W light bulb for up to 6 hours.

PET PLASTIC IS A RESPONSIBLE CHOICE FOR THE ENVIRONMENT AND IN MANY APPLICATIONS, THE RIGHT CHOICE FOR SUSTAINABILITY GOALS?



YOUR RECYCLED PET BOTTLES CAN BE MADE INTO FIBRE FOR PILLOWS, DUVETS AND SLEEPING BAGS, FLEECE FOR JACKETS AND TOPS, ROOF INSULATION, GEOTEXTILES FOR ROAD STABILISATION, STRAPPING AND COMPOSITE LUMBER FOR OUTDOOR DECKING, RAILINGS AND FURNITURE. ■

It is important that as a society we aim to make the best affordable use of these valuable plastic resources. This is good for the environment, for the economy and for the international community.

petco

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PETCO is the trading name of the PET Plastic Recycling Company (Pty) Ltd, the non-profit industry association that promotes and funds the recycling of post consumer PET bottles. PETCO has come a long way since its establishment in 2004. Our target is to collect increasing tonnage of post consumer PET, assist with the establishment of more collection and drop off centres and steadily build awareness through consistent and focused messaging. brandtree_PET027