

# Shrink wrap labels and their impact on recycling

**R**etailers seeking to make choices that benefit the environment should avoid products packaged with shrink labels. Similarly, they should consider the 'green credentials' of alternatives to what are called 'shrink sleeves' in the trade.

That's the message from Extrupet joint managing director Chandru Wadhwani, in response to the common misconception that using shrink sleeves benefit the recycling process.

"Unfortunately, that's just not true. Shrink sleeve labels, especially those manufactured from PVC and PET, pose significant challenges to the recycling process for post-consumer PET bottles," he said.

As a PET bottle-to-bottle recycler, Extrupet, along with the guidance of PETCO, has fought hard to change the mentality and raise awareness of how shrink sleeve packaging in South Africa is detrimental to the greater recycling industry.

"The simple fact is that bottles can't be 'de-sleeved easily for recycling', as many providers of the technology claim. In addition, the associated costs are often prohibitive and, as a result, many shrink-sleeved PET bottles are never collected for recycling and end up in landfills or oceans. Furthermore, there is no end-of-life use for these PVC and PET shrink sleeve labels. This renders them all to the waste stream," he stipulated.

Wadhwani encouraged all brand owners, converters and machinery manufacturers to be more attentive to the packaging design of products they are putting to market.

"The effects of 'design for recycling' on sustainability and the circular economy play a big role and one that the whole value chain needs to be a part of. However, we can only do so if we are aware and educated about the issues the recycling industry faces," he said.

Misconceptions and blatant disinformation about recycling are among the biggest challenges faced by the bottled water industry and the recycling sector in South Africa, according to SANBWA CEO Charlotte Metcalf.

"Instead of following international trends blindly, producers, consumers and legislators must do what's best for South

Africa. And they can do that by critically examining the new technologies mooted to determine if they are applicable to the South African situation or if they would disrupt the very successful recycling streams that we have," she said.

"For example, many are punting biodegradable bottles. South Africa's recycling ecosystem, however, can't accommodate these at present. And, if they are – by mistake – recycled with PET, the PET is contaminated and rendered worthless.

"Another example is the 'box' or 'carton'. There are very few recycling plants in South Africa that can separate the cardboard from the 'sleeve' that ensures it doesn't leak. As a result, they can't be recycled and yet people believe boxed water is an alternative to PET."

The best option, according to Metcalf, is to opt for a PET bottle and to recycle it. The PET recycling stream in South Africa is robust and well-managed, and supports close to 66 000 South Africans.

As a country, 62% of PET bottles are recycled and, in 2019, 95 879 tonnes of post-consumer PET bottles were collected, which would otherwise have occupied 594 448m<sup>3</sup> of landfill space and produced 144 000 tonnes of carbon emissions.

Aside from these environmental benefits, PET recycling also generated 65 900 income-earning opportunities among informal reclaimers and SMMEs, with R1.1bn injected into the downstream economy via the manufacturing, distribution and sale of products made from recycled PET (rPET). PETCO's Designing for the Environment Guideline encourages packaging designers, brand owners and converters to design and specify PET containers with the environment in mind, that are compatible with South Africa's available collection and recycling infrastructure, and that are aligned with the end-use markets prevalent in the region.



They also encourage the inclusion of recycled content (rPET) in PET packaging alongside transparency about the usage of rPET and the recyclability of the packaging.

In terms of the use of labels and adhesives, the guidelines specify tamper-evident seals and sleeves that completely detach from PET bottles during the reprocessing or washing phase of recycling. They recommend avoiding the use of foil tamper-evident seals that leave remnants of foil and adhesive behind, as well as PET or PVC sleeves and labels with PET bottles.

Additionally, the guidelines point out that metallised/foil labels on film are costly to remove, increase contamination and have the potential to devalue the collected material. They also increase the rejection rate in the sorting line and reduce the yield.

Paper labels aren't ideal either, especially on plastic film because they cause significant problems in conventional recycling. Recyclers prefer polyethylene and polypropylene labels.

Where adhesives are absolutely necessary, the guidelines suggest those that are soluble or alkali-soluble at 60°C to 80°C. For self-adhesive labels, they recommend glue that is designed to stay on the label. 💧