

Polystyrene recycling

up 19%

POLYSTYRENE RECYCLING in South Africa has increased by 19% during 2019, due to tremendous growth in end-markets using post-consumer recycled (PCR) polystyrene.

According to the latest plastics recycling figures released by Plastics|SA, the country's plastics conversion rate shrunk by 1.8% (to 1.84-million tons of polymer) compared to 2018 – with 337 745 tons of material recycled into new products.

Adri Spangenberg, CEO of the Polystyrene Association of SA, explains that factors such as the economic downturn; ongoing load shedding and the rising costs of electricity, fuel and labour had a negative impact on the local recycling industry. 'Despite these deterring factors, we increased the reprocessing of polystyrene to 6 653 tons.'

Both expanded (EPS) and high-impact polystyrene (HIPS) have traditionally been classified as 'difficult to recycle' plastics because the material is lightweight and bulky, making collection and transportation challenging, and resulting in supply chain bottlenecks.

In 2019, to address this issue, the association began fulfilling a facilitator role by putting recyclers, collectors and suppliers of polystyrene in contact with each other. This resulted in the various end-markets that use PCR polystyrene enjoying a more consistent supply of recyclate and increasing their capacity.

The 39 recyclers of polystyrene reprocessed 3 699 tons of EPS between them.

The décor market continued to be the largest end-use market for EPS packaging materials, with 42% of all the recycled material going into the manufacturing of items such as picture frames, curtain rods, skirtings and profiles.

The organisation also noticed a dramatic increase in the demand for PCR polystyrene in the building and construction industries and predicts that this is likely to develop into the biggest end-market during the next reporting period.

'Towards the end of 2019, recyclers such as Envirolite Concrete began expanding their operations around the country. Since they can use post-consumer EPS and HIPS in every colour or grade, and thanks to the convenient locations of their factories, we were able to direct more materials to them with shorter lead times,' she says. These lightweight concrete bricks are made from PCR polystyrene coated with a special cement mixture.

'We've developed a mechanism for polystyrene collection and recycling that is unlike anything else in the world. With the buy-in and support from government, citizens and the rest of the industry, it has the potential to become a blueprint for other countries to follow,' Adri concludes.