

ENVIRONMENT

Sportswear giant set to tap Indian firm's PET project to cut virgin plastic use



Ajeet Mahale

NASHIK, JUNE 09, 2019 22:53 IST

UPDATED: JUNE 09, 2019 22:53 IST

Discarded bottles are upcycled to make high-quality polyester filament yarn for Adidas products

Global sportswear giant Adidas aims at eliminating the use of virgin plastics in its products by 2024 – with a little help from a Maharashtra-based firm – the only one of its kind in the country to produce yarn out of discarded PET bottles.

At its first factory set up in Nashik five years ago, Polygenta Technology Limited deploys an unique technology to break down used PET (short for Polyethylene Terephthalate) bottles and convert them into polyester filament yarn.

The firm, with a capacity to convert 30 tonnes of PET bottles into yarn a day, plans to scale up capacity to around 100 tonnes a day in the next two years to meet demand from the likes of Adidas – one of its first clients.

Gobbling bottles

This would mean Polygenta would be converting around 8 to 10 million bottles a day in a couple of years from now. The yarn produced by Polygenta, currently sent to Adidas' manufacturing centres to be converted into sportswear, may also be tapped to potentially upcycle clothes made from polyester yarn, said the firm's chief marketing officer Makarand Kulkarni.

According to the United Nations, around 300 million tonnes of plastic are produced every year – roughly the weight of the entire human population. Of this, eight million tonnes of plastic waste ends up in the oceans; PET bottles are the main contributors to plastic waste globally and in India.

Mr. Kulkarni said the firm's technology allows for breaking down used PET bottles to the base product - an ester, which is then used to manufacture yarn.

"Since the time we started, we have recycled over two billion bottles. At present, we recycle roughly two million bottles a day," he said.

Mr. Kulkarni said the PET material collection rate in India is nearly 80% – among the best in the world – but a good portion of these bottles are downcycled, eliminating the possibility of further **recycling**. Downcycling is reuse of waste in a manner that the recycled product is of lower value than the original material.

"Through our process, we produce high quality polyester filament yarn, which is on par with yarn made through the conventional process. Moreover, there is huge energy savings through this process, making it more sustainable," he said.

Energy efficient

The upcycling process consumes 86% less water and 75% less energy than conventional manufacturing, but costs approximately 10% more, Polygenta claims.

"A key area where costs can be reduced is curbing the level of contamination in PET bottles. If PET bottles are disposed and collected properly, one can expect savings to the tune of ₹5 per kg," Mr. Kulkarni said, citing an example of Japan where individuals dispose PET bottles after removing the caps and the labels.