

Dow's Microfoaming Technology to Help Mitigate the Carbon Footprint of the Rio 2016 Olympic Games

Innovative technology enables the reduction of greenhouse gas emissions through new method that increases packaging production with the same amount of raw material.

SÃO PAULO - April 13, 2016 – As the Official Chemistry Company of the Olympic Games and the Official Carbon Partner of Rio 2016, The Dow Chemical Company (NYSE: DOW) has launched an innovative Microfoaming Technology for the packaging industry in Latin America. The project is part of a comprehensive Dow program focused on mitigating the carbon footprint of the Rio 2016 Olympic Games.

Paloma Alonso, Dow Packaging & Specialty Plastics Latin America commercial vice president, said:

"Packaging plays an important role in helping minimize food waste. The leveraging of the Microfoaming technology as one of the Rio 2016 carbon mitigation projects promotes a rational utilization of packaging and showcases how it can help enable reductions in greenhouse gas emissions"

Mitigating the carbon footprint of the Rio 2016 Olympic Games

In addition to driving differentiated performance in the packaging industry, the Microfoaming technology enables reductions in greenhouse gas emissions through new production methods that lead to higher productivity and improvements in the extrusion process of films.

Given its potential to enhance the production of films, this technology has been incorporated to the tailor-made program designed by Dow to mitigate the carbon footprint of the Rio 2016 Olympic Games.



"As the Official Chemistry Company of the Olympic Games and the Official Carbon Partner of Rio 2016, Dow is engaging the value chain to help us deliver on our carbon mitigation commitments. The Microfoaming technology project is a clear example of how Dow is leveraging the power of the Olympic Games to influence the packaging industry towards lower carbon solutions," said Tania Braga, Rio 2016 head of Sustainability, Legacy and Accessibility.

The project is being implemented in partnership with manufacturers located in Brazil (Valfilm), Argentina (Petropack), Mexico (Folmex), Colombia and Guatemala (Plastilene) as well as MuCell Extrusion LLC, an equipment manufacturer for extrusion solutions and Dow's exclusive collaborator for the foamed film technology.

Dow is working with external partners to quantify the expected reductions in carbon emissions from this innovative process. After verification by independent auditors, the results along with those from the other projects being implemented in Brazil and Latin America, will be applied toward the mitigation of Rio 2016's carbon footprint.

Besides mitigating carbon emissions from the organization and delivery of the Olympic Games - 500,000 tons of CO₂ equivalent (CO₂e) - Dow and Rio 2016 are working to generate additional climate benefits of 1.5 million CO₂e by 2026, intended for other emissions linked to the Games.



Microfoaming Technology: state-of-the-art packaging solutions

Microfoaming is a licensed technology developed to meet market demands for solutions that reduce weight and add a more sustainable profile to plastic films and packages. Dow's Microfoaming technology allows density reduction (lightweighting) in coextruded films through physical foaming. This ensures more packaging material is produced using the same amount of resin.

Some of the key benefits offered by the Microfoaming technology, coupled with Dow's extensive range of polyethylene resins include:

- Improved packaging performance such as superior sealing integrity and abuse resistance
- Differentiated optical properties that deliver characteristics of premium packaging
- A superior environmental profile compared to traditional packaging

Light and versatile, microfoamed packaging is ideal for the food industry. The technology can also be used to develop flexible packaging for collation shrink, cosmetic, hygiene and cleaning sectors, for applications that include stand-up pouches, laminated PE, PE PET, PE and BOPP films. Additional uses include reduced pigment load films, FFS (Fill, Form and Seal) packaging, heavy duty shipping sacks, soft good overwrap packaging and detergent pouches.