Interplasp's Sustainability Calculation: Zero Waste + VPF + Commitment = 34% Carbon Footprint Reduction in 2 Years

PROJECT DESCRIPTION

Interplasp is making great strides towards a more sustainable future.

It all began in 2011 with the first vacuum production on the VPF (Variable Pressure Foaming), a state-of-the-art technology in the manufacturing of flexible polyurethane foam, respectful of the environment and those who work with it. The hermeticity required to work under pressure and vacuum allows the forced conduction of the gases emitted by the reaction through powerful active carbon filters. This allows the elimination of harmful foaming agents, improves the energy efficiency of the process and - by requiring less water (the main CO2 generator) - allows for a reduction of the carbon footprint.

Although VPF marked the beginning, since then Interplasp has been constantly at the forefront of sustainability, optimising its manufacturing process and collaborating in promising projects that aim to improve the impact of flexible polyurethane foam on the environment in one way or another. Some of the most important examples are:

- The Pucell project which aims to develop more sustainable polyurethane foams by incorporating cellulosic materials. By using renewable materials, the company can reduce the carbon footprint of the foams and make them more sustainable, and potentially even biodegradable.
- The Enzycl03 project which aims to enzymatically recycle flexible polyurethane foams through two combined strategies: the development of new formulations of biodegradable flexible polyurethane foams and the development of oxidation treatments.
- The Bioemerger project seeks to use biotechnological tools, using microorganisms and enzymes as biocatalysts, to address the management of polyurethane foam by-products, carrying out reactions and processes more efficiently and in a more environmentally friendly way.

PROJECT IMPACT

Interplasp has successfully reduced its carbon footprint by 34% in the last two years through a variety of initiatives.

The AENOR institute has certified this reduction thanks to the use of VPF technology, the reduction of emissions from the consumption of fuel, oils, vehicle greases, etc. In addition to this, we find the installation of an extensive photovoltaic system on the roofs of the halls, which considerably reduces the demand on the company's electricity grid.

This considerable reduction of the carbon footprint would have been impossible to achieve without the implementation of necessary policies to obtain the zero-waste certificate two years in a row. These policies ensure that waste is converted or treated by the company into by-products or is given an end use other than landfill, such as creating compressed foam bales for export. For example, in a single year, the company recovered ~320 tons of waste and managed to reuse and recycle ~36 tons of hazardous waste, preventing it from being discharged into the environment and polluting the water and soil strata.

These initiatives, however, do not end here. In 2022, Interplasp made history by producing flexible polyurethane foam in VPF (Variable Pressure Foaming) using recycled polyols obtained from the chemical digestion of end-of-life mattresses. The incorporation of recycled polyol reagents will reduce the carbon footprint in the future, make the manufacturing process more sustainable and increase the biodegradability of the resulting foams.

Interplasp's commitment to sustainability is evident in its vision for the future. With the continuous expansion of existing facilities, plans to introduce a foam agglomerate production line are underway. The company aims to close the production cycle by making use of the typical waste in foam processing together with reducing waste whilst adding to its value. Other related green efforts by the company include installing indigenous gardens around the entire factory and providing incentives for workers to use environmentally friendly transport.

ABOUT INTERPLASP

Interplasp is a flexible polyurethane foam manufacturer with more than 35 years of experience. It is located in Yecla (Spain) and belongs to the Sheela Foam group.

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