

# THE WHITE BOW

## LOGISTICS CENTER IN SPAIN



This spectacular, avant-garde building is the logistics center for Gazechim Composites Ibérica. As a leader in the distribution of composites, Gazechim were committed to going one step further in demonstrating the possibilities of advanced composite materials in architecture when building their new logistics hub.

The building is the result of a successful collaboration between naval and civil architects. The naval influence can be seen through the design: a sea of wave shaped slats protecting the office section of the building with the majestic 'bow' of the structure rising and floating above, evoking images of a ship sailing on the sea and earning the building its nickname, The White Bow.

### THE FLOATING CANOPY

A stunning addition to the building is a 340sqm, curved, selfsupporting canopy over the loading dock. This challenging design was only feasible thanks to the high strength-to-weight properties of the composite materials used. The canopy was made using a sandwich structure, with glass skins on the outside, Gurit PET in the center and was infused with a graphene modified polymer matrix.

### OVERVIEW

Gazechim Composites Ibérica showcased the architectural potential of composites with "The White Bow," a logistics center featuring a 340 m<sup>2</sup> curved, self-supporting canopy constructed using Gurit PET as the sandwich core material. The lightweight composite canopy required no additional support columns, improving safety and installation efficiency. With excellent insulation, low resin uptake, and recycled-PET content, the design delivers strong sustainability benefits while enabling bold, free-form architectural expression.

The properties of Gurit PET make it ideally suited to this type of application due to its:

- Good strength to weight ratio.
- Excellent thermal insulation properties.
- Low resin absorption.
- Lower environmental impact, made from up to 100% recycled PET from plastic bottles.

## THE BENEFITS OF USING COMPOSITES

The use of Gurit PET core for the canopy contributed to its excellent mechanical properties, guaranteeing:

- A structure which was half the weight of an equivalent part made of steel.
- No heavy or bulky auxiliary support structure needed.
- No pillars – eliminating the risks of truck collisions in the loading area.
- Better thermal insulation and efficiency, contributing to considerable energy savings.
- Quicker construction: Composite parts were manufactured off-site and assembled on-site.

### IN TOTAL THE GAZECHIM LOGISTICS CENTRE HAS:

- 600sqm of composites in the façade and canopy
- 880lm of composite profiles for the shades
- 3000lm of composite rebar to reinforce the concrete



**Above: The 340sqm, curved, self-supporting canopy over the loading dock**

## A SUSTAINABLE STRUCTURE

Additional sustainability benefits were realised in this structure through:

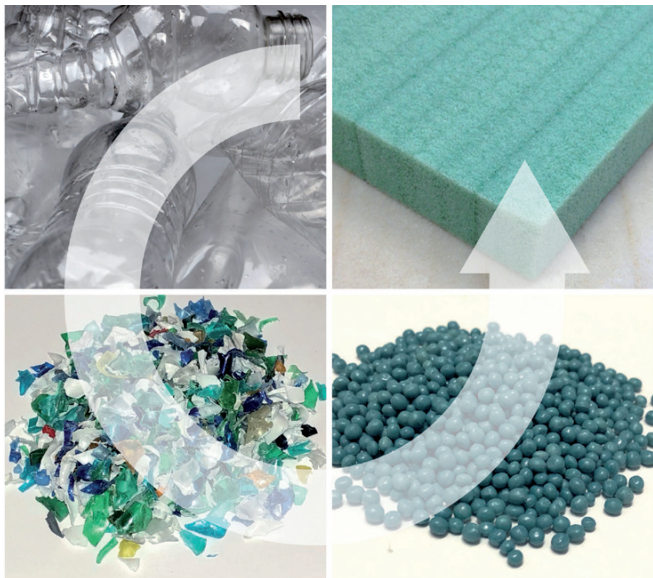
- The thermal insulation provided by the composite slats, contributing favourably to energy savings.
- Lightweighting: Reduction in the quantity of material and lower transportation weight of the components.

- The canopy structure features recycled Gurit PET which saves waste from landfill.

This was a pioneering project; whilst clearly demonstrating the competitive advantages of composites, it shows the great synergies and market potential that exist when integrating composites with traditional materials within architectural projects, shaping the future of building and construction with composites.



**Above: The 340sqm, curved, self-supporting canopy over the loading dock**



UP TO 700 PLASTIC  
BOTTLES ARE  
RECYCLED IN  
EACH 25MM SHEET  
OF GURIT PET

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The vast experience of using composites in the wind energy and marine markets, has allowed us to transfer its advantages to the world of architecture. Building with composites incorporating Gurit PET gave us the freedom to design and build a large, lightweight, self-supporting structure. The reduction in the carbon footprint was also a significant advantage, due to Gurit PET being made from recycled PET. Shaping the future with composites.



Julio César Galiana, Naval Engineer,  
European Advanced Composites



For more information on this project, visit:  
<https://www.youtube.com/watch?v=6UIRtAYJ3ZY>  
[www.gazechim.es](http://www.gazechim.es)