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## Nervesa della Battaglia (Treviso, Italy) CANTINA GIUSTI WINERY

A WATERPROOFING SYSTEM FOR A GREEN ROOF TO CREATE A BUILDING IN HARMONY WITH LOCAL SURROUNDINGS

The Montello Hills near Treviso (Northern Italy) are the setting for the new Cantina Giusti Winery: 5.000 m<sup>2</sup> that reflect an unbreakable bond between the local territory and tradition. Polyglass made its contribution to the project by helping create one of the most original and spectacular parts of the building: a waterproofing system for the green roof, which was achieved by applying PLANA P and ELASTOSHIELD TS4 P membranes and an additional synthetic membrane, MAPEPLAN T B.

Located in Nervesa della Battaglia (Province of Treviso), the winery is a reflection of the business spirit of the Italian-Canadian businessman Ermenegildo Giusti, who decided to return to his homeland and put all his effort into redeveloping this area at the foot of the Montello Hills. This prestigious project is the result of a childhood dream that has been transformed into reality: in fact, the farm includes around one hundred hectares of vineyards, a panoramic winery and various rustic houses.

The aim was to preserve the natural biodiversity of the surrounding area, exploit the energy available from alternative sources, re-establish the natural balance of local woodland and promote eco-sustainable cultivation practices.

The Armando Guizzo architectural studio was responsible for the design of the winery, creating a building which, thanks to its undulating form, is in total harmony with the surrounding landscape. The building is five floors high, with two thirds of its overall development below ground level (from a level of -7.7 m to +6.7 m). The belvedere, which sits on the top of the structure, provides magnificent panoramic views of the area and can be used to gain access to the green roof with its very own vineyard.

### The green roof

Polyglass's part in this ambitious project was to specify the stratigraphic layout of the waterproofing system for the green roof during the design stage and then to supply the

actual materials during the installation stage.

Choosing to create a green roof brings a lot of advantages, such as better thermal insulation, which helps reduce energy consumption, a reduction in the heat island effect with lower CO<sub>2</sub> emissions and longer service life for the waterproofing system. Besides, it creates extra green areas which people can use and enjoy, as well as new habitats for flora and fauna, a further contribution in helping safeguard biodiversity.

The result of all this also means the property has a higher commercial value, and all those using and living in the building can enjoy a better quality of life.

### Waterproofing system

The roof of the Cantina Giusti Winery is so much more than a simple but intensive green roof. In fact, there is a real vineyard growing on top of the building, which requires all the work and attention typically needed to cultivate grapevines.

RIGHT. A view from above of the building.



This meant that it was critical to create the correct stratigraphic layout. The first step was to apply 3 mm thick PLANA P 3 membrane to create a vapour barrier, which regulates the flow of water vapour from inside the building towards the outside and helps prevent problems caused by the formation of condensation between the various layers of the roof. Thanks to its excellent mechanical properties in terms of extension at break, high puncture resistance and dimensional stability, 4 mm thick ELASTOSHIELD TS4 P elastomeric membrane was used to cover the expansion joints using the pontage technique.

MAPEPLAN T B 20 synthetic membrane then formed the final layer for

the roof. This type of membrane is made from flexible polyolefin, which guarantees total impermeability to rainwater and water from irrigation systems, while also helping to prevent the load-bearing structure from deteriorating. It is particularly suitable for green roofs because, as stated on the FLL test certificate, it is resistant to roots and rhizomes and complies with EN 13948 standards. What is more, thanks to its unique composition, it is more resistant to aggressive substances which percolate from below and to atmospheric agents, microorganisms and bacteria. Also, its excellent dimensional stability is guaranteed by incorporating a thin layer of glass mat and thanks to the special "multi-extrusion coat-



**ABOVE.** Application of Mapeplan T B synthetic membrane over the insulating layers.

ing” process used to manufacture the membrane. This gives the product excellent resistance to deterioration, as demonstrated by accelerated ageing tests carried out on the membrane.

MAPEPLAN T B waterproofing membranes have their own EPD (Environmental Product Declaration), as defined by ISO 14025 standards. The EPD contains information on the product’s impact on the environment, which has been measured using parameters calculated according to LCA (Life Cycle Assessment) methods, following the ISO 14040 series of standards. The philosophy surrounding the majestic architectural structure of the Cantina Giusti Winery perfectly reflects Polyglass’s mission: research and innovation in full respect of the ecosystem to improve energy efficiency and reduce waste. Entrusting Polyglass Technical Services with the design of a waterproofing solution means you also benefit from a tailor-made support service in line with your expectations and personal requirements, thereby creating a long-lasting waterproofing system that remains perfectly functional over the years.

#### MAPEPLAN T B

Synthetic roofing waterproofing membrane in flexible polyolefin FPO/TPO produced in one multi-extrusion coating process, with high-quality raw materials, reinforced with glass mat. MAPEPLAN T B complies with EN 13956 standard.

FIND OUT MORE



#### TECHNICAL DATA

**Cantina Giusti Winery,**  
Nervesa della Battaglia  
(Province of Treviso, Italy)  
**Year of construction:**  
2019  
**Year of the intervention:**  
2019  
**Intervention by**  
**Polyglass:** supplying

products for waterproofing  
the green roof  
**Client:** Cantina Giusti  
**Design:** architetto Guizzo  
Armando architettura e  
paesaggio  
**Main contractor:** E.MA.  
PRICE. SpA  
**Waterproofing**  
**contractor:** Nenzi Srl

**Polyglass coordinators:**  
Christian Spinazzè and  
Mauro Redemagni,  
Polyglass SpA (Italy)

#### POLYGLASS PRODUCTS

Waterproofing membranes:  
Plana P\*, Elastoshield TS 4  
P\*, Mapeplan T B\*

\*These products are  
manufactured and  
distributed by Polyglass  
SpA, a subsidiary of the  
Mapei Group.

For further information on  
products visit [polyglass.com](http://polyglass.com)

# Mapeplan®

Appl. to all membranes in **FPO/TPO** and **FPO-F**

HIGH REFLECTANCE  
FOR ENERGY SAVING



ENVIRONMENTAL FRIENDLY  
(ENVIRONMENTAL PRODUCT  
DECLARATION)

IDEAL FOR LARGE AND  
COMPLEX SURFACES



Mapeplan® is a synthetic roofing waterproofing membrane in flexible polyolefin FPO/TPO produced in one multi-extrusion coating process, with high-quality raw materials, reinforced with glass mat. Mapeplan T B complies with EN 13956 standard. The product is characterized by high reflectance, which allows for energy saving. The membrane is also characterized by high resistance to deterioration, as demonstrated by accelerated ageing tests carried out on the membrane. The philosophy surrounding the majestic architectural structure of the Cantina Giusti Winery perfectly reflects Polyglass's mission: research and innovation in full respect of the ecosystem to improve energy efficiency and reduce waste. Entrusting Polyglass Technical Services with the design of a waterproofing solution means you also benefit from a tailor-made support service in line with your expectations and personal requirements, thereby creating a long-lasting waterproofing system that remains perfectly functional over the years.

