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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

Problems and solutions

A real vineyard sits on top of the Cantina Giusti Winery; this meant that it was critical to create the correct stratigraphic layout of the roof. Polyglass PLANA P and ELASTOSHIELD TS4 P membranes, and an additional MAPEPLAN T B synthetic membrane, enabled all objectives to be achieved, guaranteeing a perfect waterproofing system in full respect of the environment.

The Montello Hills near Treviso (Northern Italy) are the setting for the new Cantina Giusti Winery: 5.000 m² 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 CO₂ 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

RIGHT. A view from above of the building.



building, which requires all the work and attention typically needed to cultivate grapevines.

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



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

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 coating" 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.



Find out more
MAPEPLAN T B

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

Mapeplan®

Synthetic membranes in **FPO/TPO** and **PVC-P**

HIGH REFLECTANCE
FOR ENERGY SAVING



ENVIRONMENTAL FRIENDLY
(ENVIRONMENTAL PRODUCT
DECLARATION)



IDEAL FOR LARGE AND
COMPLEX SURFACES

MAPEPLAN® T Smart White guarantees a high solar reflectance. This white covering reduces the roof's surface temperature by 50% and, consequently, also the internal temperature of the building, keeping it constant. MAPEPLAN® production, is the line of synthetic coverings for waterproofing, which thanks to an exclusive "multi-extrusion coating" technology is able to provide PVC-P and FPO/TPO surfaces guaranteed to last long and have great performances. One of the most important characteristics of the MAPEPLAN® surfaces is their great workability and weldability. The thermal welding consists of an actual fusion and union of the molecular chains and provides resistance to the water head and mechanical stress. With MAPEPLAN® waterproofing systems it's possible to realize totally hermetic "continuous" waterproofing for roofing and civil engineering works.



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