





Spectacular HI-MACS® façade: traditional school architecture meets high-tech material



Lisbon-based architectural firm Falanstério crafted a cubic extension for a primary school in the centre of the Portuguese town of Montijo. Its ventilated curtain wall façade now gleams in spectacular HI-MACS® 'Alpine White' and boasts triangular cut-outs as interesting design elements. The curtain wall made from the solid surface material protects the glass façade behind it from inclement weather and provides effective shade from harsh sunlight.

EB Joaquim de Almeida primary school in the centre of Montijo was extended to include a nursery school and additional classrooms. The rising number of pupils had outgrown the old school buildings, so in response, Lisbon-based architectural firm Falanstério designed an extension on the eastern side of the canteen, which with a floor space of $100m^2$ would provide additional space for pupils, teachers and also parents. The extension functions not just as an addition to the existing canteen, but also houses the teachers' room with work areas, meeting rooms and a representative reception area. The main space of the extension was executed as a cube-shaped pavilion. The architects first installed a high-quality double-glazed glass façade with aluminium framework.





Next, fabricator Horta & Veríssimo gave the new building a ventilated curtain wall made of Solid Surface material HI-MACS® to provide shade for the glass façade behind it and ensure optimal ventilation at the same time. The curtain wall primarily comprises HI-MACS® panels in 'Alpine White': 19 panels measuring 3,680 mm × 1,350 mm × 12 mm, five panels measuring 3,680 mm × 910 mm × 12 mm, and nine panels measuring 3,680 mm × 760 mm × 12 mm. Two panels in 'Black' measuring 360 mm × 760 mm × 12 mm were added as well. Overall, the entire process from panel manufacture to final installation on site took just under four weeks. The solid surface elements were fixed with KEIL undercut anchors.

With its almost unlimited design possibilities, HI-MACS® was the ideal choice for this type of façade cladding. The Solid Surface material boasts a number of special properties including excellent weather resistance, which was a must in this project. The ability to process the Solid Surface panels with precision – to give them routed geometrical cut-outs in the shape of triangles – means that the curtain wall still lets in enough light from the outside while also providing sufficient privacy and a pleasant indoor environment.



HI-MACS® is also the first solid surface material on the market to receive the official European Technical Approval (ETA) for façades for the Alpine White S728 colour. In addition, the solid surface material also received the French QB certification and the CSTB ATec "Avis Technique" for façade applications.

Visually the new space blends in perfectly with the existing buildings. Thanks to its striking aesthetic and notably contemporary design, the pavilion contrasts interestingly from the old buildings, but still maintains a harmonic connection to the adjacent buildings due to the geometrical design elements, inspired by traditional Portuguese styles.

Interested in this project? Watch a video of the installation at the following link: https://www.youtube.com/watch?v=zQRAqPGC6jM&feature=youtu.be



PROJECT INFORMATION

Project name: EB Joaquim de Almeida primary school extension

Location: Montijo (Setúbal municipality), Portugal

Architecture and design: Falanstério atelier de arquitectura; Lisbon

Façade engineering: KEIL; ALLFACE

HI-MACS® supplier: Banema S.A.

HI-MACS® fabrication: Horta & Veríssimo

Material: HI-MACS® Alpine White S028, HI-MACS® Black S022, www.himacs.eu

HI-MACS® elements: building façade

Photo credit: © Banema S.A. / photographer: Tiago Casanova





HI-MACS® by LG Hausys

www.himacs.er

HI-MACS® is a solid surface material that can be moulded into any shape. It is widely used for architectural and interior applications, such as sculptural and high performance wall-cladding or kitchen, bathroom and furniture surfaces, in commercial, residential and public space projects. It is composed of minerals, acrylic and natural pigments that come together to provide a smooth, non-porous and visually seamless surface which meets the highest standards for quality, aesthetics, fabrication, functionality and hygiene – offering manifold advantages over conventional materials.

HI-MACS® provides limitless possibilities for surfacing solutions and inspires creative minds from all over the world. **Zaha Hadid, Jean Nouvel, Rafael Moneo, Karim Rashid, Marcel Wanders** and **David Chipperfield**, among others, have completed fabulous projects using HI-MACS®.

At the forefront of innovation as always, LG Hausys recently introduced two new products. First HI-MACS® Ultra-Thermoforming, an innovative formula that pushes the boundaries of solid surface shaping to a whole new level, with 30% more thermoplastic capabilities - the biggest innovation for the Solid Surface history since its inception in 1967. Now, HI-MACS® Intense Ultra, combining the characteristics from two disparate worlds: Intense Colour Technology and Ultra-Thermoforming.

LG Hausys' HI-MACS® uses a simple heating process to give three-dimensional thermoplastic forming capabilities, allows visually seamless designs, offers a virtually limitless range of colours and – for some shades exhibits a special translucency when exposed to light. Although HI-MACS® is almost as robust as stone, it can be worked in a similar way as wood: it can be sawn, routed, drilled or sanded.

HI-MACS® is manufactured using a new generation technology, the **thermal cure**. The temperature reached during the manufacturing process sets HI-MACS® apart from other solid surfaces and creates a denser, even more homogeneous, sturdy, durable surface — with a better resistance and superior thermoforming performance.

HI-MACS® does not absorb humidity, is highly resistant to stains, and is easy to clean, maintain and repair.

Countless internationally recognized certificates attest to the quality of HI-MACS® in terms of ecological commitment, hygiene and fire resistance – being the first Solid Surface in the market to receive the official **European Technical Approval (ETA) for façades** – for Alpine White S728 colour. Furthermore, HI-MACS® has obtained the French **QB certification** and **CSTB ATec "Avis Technique"** for facade applications.

HI-MACS® offers a 15-year warranty for products fabricated by a Quality Club Member.



HI-MACS®. Because Quality Wins.

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^{*} HI-MACS® is designed and produced by LG HAUSYS, a world leader in the technology sector belonging to LG Group, and distributed by LG HAUSYS EUROPE based in Frankfurt (Germany).