

Iris Ceramica Group, ANFFECC and Esmalglass: shared sustainability for a supply chain working as a system

Iris Ceramica Group, ANFFECC and Esmalglass present the prototype of a new ceramic slab, made in the **H2 Factory®** in Castellarano powered by a blend of green hydrogen and natural gas. The distinctive feature of this surface lies in the use of a mix of vitreous glazes, made in a smelting kiln powered exclusively by green hydrogen at the Esmalglass (Altadia Group) plant in Vila Real.

This is the result of the **H2 Frit** project, a major research initiative led by ANFFECC and funded by **Generalitat Valenciana**, with the active participation of **Esmalglass, BP, ITC and Carbueros Metálicos**. The main objective was to conduct a feasibility study on the production of glass-ceramic *frits* (vitreous glazes) using green hydrogen as fuel, partially or completely replacing methane. The future aim is to considerably reduce the CO2 emissions generated by the production of frits.

As part of the project, a pilot kiln installed at Esmalglass was equipped with a *skid* system used to mix oxygen, methane and hydrogen in different percentages and, with multi-component burners, was able to produce glass-ceramic frits using 100% H2, with chemical and physical characteristics perfectly in line with those produced in standard conditions (with methane).

The active cooperation between Iris Ceramica Group and Esmalglass is the tangible result of a client-supplier partnership based on shared values and the common commitment to creating a sustainable, innovative and circular supply chain.

In a rapidly changing and continuously evolving socio-economic context, the concept of **partnership is crucial**. Real transformation cannot take place in an isolated manner: it demands a shared vision and common values. For Iris Ceramica Group, talking of partnership means building bridges between stakeholders – universities, research centres, businesses, associations, institutions – and fuelling constant dialogue.

*“We at Iris Ceramica Group believe that sustainability is a responsible approach and a tool for generating common value. Our real strength comes from the creation of a **system**, engaging suppliers in a common path that turns the supply chain into a virtuous ecosystem. We found Esmalglass to be a partner ready to welcome this challenge, launching concrete actions: this prototype slab is a tangible example of **shared sustainability** throughout the supply chain. Sharing is what leads to a cooperative ecosystem that can accelerate innovation and cultural changes. Only in this way can we tackle today’s challenges and offer a contribution as a company to the design of a more sustainable and inclusive society that looks to the future.”*
– **Federica Minozzi, CEO of Iris Ceramica Group**

*“Esmalglass, a brand in the **Altadia** group, has built its strategy around three fundamental pillars: innovation, sustainability and technology. This is why we have set the objective of going one step further to reduce emissions and progress towards the decarbonisation of the*

whole ceramic sector, promoting initiatives such as digitalisation, based on water-based products, and the production of glass-ceramic frits using green hydrogen.

*For us, Iris Ceramica Group is a partner that shares our values. This allows us to pool skills and vision, laying the foundations for achieving major targets and generating concrete benefits for society as a whole. Because it is only through cooperation and working as a system that we can turn the challenges of the future into real opportunities for sustainable growth.” – **Bernd Högemann, CEO of Altadia Group.***

Through this project, Iris Ceramica Group again renews its invitation to introduce continuous improvements throughout the supply chain, urging partners to become drivers of change, working together as a system to reduce environmental impacts and generate common value. Through these stimuli, the use of green hydrogen as an alternative energy carrier has, in this specific case, also been extended to the supply chain. The slab was also made on the line in which inks and structuring inks use water-based technology, an improvement introduced to the Group in the second half of 2025.

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