

PRESS RELEASE

ACTIVE™ CLEAN AIR & ANTIBACTERIAL CERAMIC, the new production methodology applied to ceramics that reduces polluting agents present in the air by up to 70%.

An innovative methodology, the effects of which are attested to by the Tile Council of North America and the Bologna Ceramic Centre that gives Fiandre and Iris Ceramica porcelain stoneware slabs self-cleaning and antibacterial properties and helps combat pollution.

Milan, 28 September 2009 –The convention held today in Milan and entitled “**Active for a better life**” on the theme of “Project culture and environmental issues in building materials” – organised by GranitiFiandre and Iris Ceramica in collaboration with Il Sole 24 Ore Business Media and the international architecture magazines Area and Materia – witnessed the presentation of **Active™ Clean Air & Antibacterial Ceramic**, an innovative methodology applied to Fiandre and Iris Ceramica slabs, and able – thanks to a process of photocatalysis – to significantly cut some of the most polluting agents present in the air.

This new production methodology, presented here today and tested by the Bologna Ceramic Centre, will allow for the use in indoor and outdoor wall coverings of a new ceramic material treated with an active principle that boasts antibacterial properties able to reduce pollution and nitrogen oxide present in the atmosphere.

Below is a summary of the results of the research carried out by the Bologna Ceramic Centre on 23rd July 2009:

- Photocatalytic activity at the liquid phase: photodegradation index $\eta\%$

Ceramic tile without photocatalytic layer:	<10
Ceramic tile with photocatalytic layer:	70

**- Photocatalytic activity at the gas phase:
in accordance with the UNI-11247-2007 Standard**

Ceramic tile without photocatalytic layer:	NO _x 23,3 / NO 31,4
Ceramic tile with photocatalytic layer:	NO _x 69,4 / NO 107,3

- Tests on resistance to bacterial growth: % survival

Ceramic tile without photocatalytic layer:	100% survival
Ceramic tile with photocatalytic layer:	0% survival

The beneficial effects of the photocatalytic tiles – activated with light and water – have been verified and attested to by the Tile Council of North America (TCNA) and by the Bologna Ceramic Centre, within the framework of a specific joint research and testing programme.

These tests show that the use of **Active™ Clean Air & Antibacterial Ceramic** as a wall and floor covering material has an important positive impact on environmental sustainability,

because it cleans the air of a large proportion of harmful emissions and PM10s, thus significantly reducing organic and inorganic polluting agents, as well as making maintenance considerably simpler and eliminating pollution caused by chemical cleaning products. In particular, **Active™ Clean Air & Antibacterial Ceramic** makes it possible to reduce organic polluting agents and nitrogen oxides, which are among the principal toxic components in urban air; in addition, because it reduces the surface tension on the water, it boasts a self-cleaning capacity as well as significant antimicrobial and antifungal properties.

The Chairman and CEO of the GranitiFiandre Group and CEO of Iris Ceramica, Graziano Verdi, was on hand to witness the debate moderated by the architect Marco Casamonti, which was able to count on the participation of Eric Astrachan, Executive Director of the Tile Council of North America, and Professor Giorgio Timellini, Director of the Bologna Ceramic Centre, the two international bodies that have certified the qualities of **Active™ Clean Air & Antibacterial Ceramic**. Particularly important were the contributions offered by Mario Tozzi, a geologist and leading researcher of the Italian Research Council National (CNR), Paolo Portoghesi, an architect who teaches at La Sapienza University in Rome, Josep Acebillo, chief architect in charge of infrastructures and town planning of the city of Barcelona, and Luca Molinari, a critic who teaches History of Contemporary Architecture at the Second University of Naples.

“At first glance, this event may seem just another new development, one of the many the technical ceramics sector has produced over the last thirty years – said the architect Casamonti during his introduction to the debate – but what we are in fact looking at here is some truly advanced research which revolutionises the role of architectural materials, which are no longer just simple inert materials able to deal with gravity and wear and tear, but can actually play a part in improving the quality of the environment in a particular set of surroundings”.

“With **Active™ Clean Air & Antibacterial Ceramic** – said Graziano Verdi, Chairman and CEO of GranitiFiandre and CEO of Iris Ceramica - buildings and urban furniture can now be made using materials that make an active contribution to creating a better atmosphere and a cleaner environment”.

“The scope of this innovation at a technological level – went on Verdi– is able to provide an effective response not only to the current economic situation, demonstrating that the way to beat the crisis involves not only focusing resolutely on environmental challenges and the green economy, but also – and more importantly – by obtaining results that are as clearly convincing as those illustrated here today, and that make a real contribution to improving the life of the end users”.

The production plants for **Active™ Clean Air & Antibacterial Ceramic** have already been completed both in Tennessee (USA) and in Sassuolo (Modena, Italy).

The photocatalytic process

Photocatalysis is a phenomenon that has various aspects in common with chlorophyllian photosynthesis; the process that lies at the base of both reactions is oxidation, set in motion thanks to the combined action of light (solar or artificial) and air in the presence of a

photocatalyst, which transforms harmful organic and inorganic substances into compounds that are entirely harmless.

Exploiting the photocatalysis method, whereby a catalyst is able to react whenever sunlight or artificial light shines on it, the air is cleaned of polluting organic substances.

The photocatalytic process is taking on an increasingly important role in environmental control activities, since it is a solution that boasts zero environmental impact.

Further details are available on the websites www.active-ceramic.com and www.floornature.com.

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