

# CerMAGAZINE

INTERNATIONAL

**INTERVIEW WITH CINO ZUCCHI**  
**ON CLIFFS BATTERED BY THE OCEAN**  
**CERSAIE, KEYNOTE ADDRESSE BY RENZO PIANO**  
**LEARNING HUB IN SINGAPORE**  
**ARCHITECTURE AND LANDSCAPE IN THE NAME OF WINE**  
**TREND TOWN TRIP:**  
**BOLOGNA, CHICAGO, HAMBURG**



Ceramic Tiles of Italy

## GARDENIA ORCHIDEA PATENTS THE NEW CRYSTAL KER PROCESS



Following a three-year research project, Gardenia Orchidea has taken another step along the road of technological innovation. The Crystal Ker system, designed and patented by the Spezzano-based company in cooperation with its partner Sacmi, is a production process that combines attention to detail with flexibility and functionality of use.

The meticulous selection of raw materials allowing for the production of a prestigious white porcelain substrate together the latest-generation BiTech technology production facilities form the basis of Crystal Ker. The resultant ultra-white products have a very low thickness and, due to Gardenia Orchidea's experience in high-resolution digital printing, can create exclusive graphic designs and prestigious aesthetic solutions, even with in-press textured surfaces.

In this new technological process, Gardenia Orchidea has combined aesthetics and innovation with eco-sustainability as the 3 mm thickness achieves a major reduction in environmental impact.

## CASALGRANDE PADANA FOCUSES ON DESIGN

Focusing on the fundamental relationship between production and design, issue number 19 of "Percorsi in ceramica", the magazine published by Casalgrande Padana, explores the company's unflinching efforts to maintain a constructive dialogue with the international design community. This issue concentrates on the book by Chiara Baglione, *Casabella 1928-2008*, published by Electa on the occasion of the eightieth anniversary of the authoritative architecture magazine, the celebrations for which saw the involvement and active contribution

of Casalgrande Padana. To highlight the privileged relationship of cooperation that it has enjoyed with the prestigious international magazine over the years, the company has decided to present a copy of the book to each designer taking part in the eighth edition of the Grand Prix. The other theme addressed in this issue of *Percorsi in ceramica* is that of design, with a focus firstly on research and experimentation as a way of constantly improving the industrial product and secondly on the cultural initiatives in which the company is actively involved. These include



carrying through projects and installations with the aim of determining new uses and forms of expression for ceramic tiles.

The publication ends with the news of the election of Franco Manfredini as chairman of Confindustria Ceramica for the two-year period 2009-2010 and the prestigious recognition of *Company to Watch 2009* for the ceramic tile sector attributed by the Databank experts to Casalgrande Padana.



## NEW PROVENZA CATALOGUE INSPIRED BY ART

Provenza has unveiled its new general catalogue featuring all the collections of the Emilceramica Group's high-end brand. This elegant volume, which emulates the style and appearance of an art catalogue, conveys the distinctive features of Provenza. It offers an overview of the different styles and

themes divided into five sections: Strato, low-thickness material in large-format sheets; Design, the most innovative and eclectic proposals; Legni, the essence of faithfully reproduced natural materials; Terrecotte, classic with a contemporary taste; Pietre e Marmi, solid inspiration for versatile surfaces.

## COEM ATTAINS LEED® CERTIFICATION

Coem SpA. has become a member of the U.S Green Building Council (USGBC), the American association responsible for implementing and regulating the construction of sustainable buildings through LEED® (Leadership in Energy and Environmental Design) certification, a standard that is now recognised worldwide. The company has certified many of its products in accordance with

LEED® criteria through the external agency CERTIQUALITY, thus demonstrating its clear and flex-



ible approach to a constantly evolving market and the spirit of research and innovation for which it has always been renowned. Amongst other

things, all Coem's certified products meet the LEED® requirements for the high content of recycled materials. Their solar reflection index allows them to reduce the heat island effect and impact on the microclimate and the habitat.

Furthermore, their low thermal conductivity gives them a high insulating capacity and allows them to contribute to energy saving of buildings.



BOLOGNA

TILES BY:  
ALFALUX, EDILCUOGHI, FAP, GARDENIA ORCHIDEA, IMPRONTA



THANKS TO:  
NUBE ITALIA.COM  
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VISUALPRO.IT



1. FAP CERAMICHE, INFINITÀ;
2. IMPRONTA CERAMICHE, EC@LETTICA;
3. GARDENIA ORCHIDEA, CRYSTAL KER;
4. EDILCUOGHI, TESSERE;
5. ALFALUX, UNIKA.



1. LA FAENZA, ZAULI COLLECTION;
2. TAGINA, JOE;
3. EDILGRES, BLOOM;
4. LAMINAM, OXIDE;
5. PHORMA, GREGORIANA;
6. PASTORELLI, EXTÈ;
7. RONDINE, CRYSTAL.



1. EMILCERAMICA, SATIN;
2. DESIGN TALE STUDIO (REFIN), R+EVOLUTION;
3. SAIME SANPROSPERO, SWING;
4. MARAZZI TECNICA, SISTEM A;
5. CASALGRANDE PADANA, GRANITOGRES SISTEMA LOGES;
6. SIMAS WASHBASIN, LFT SPAZIO.

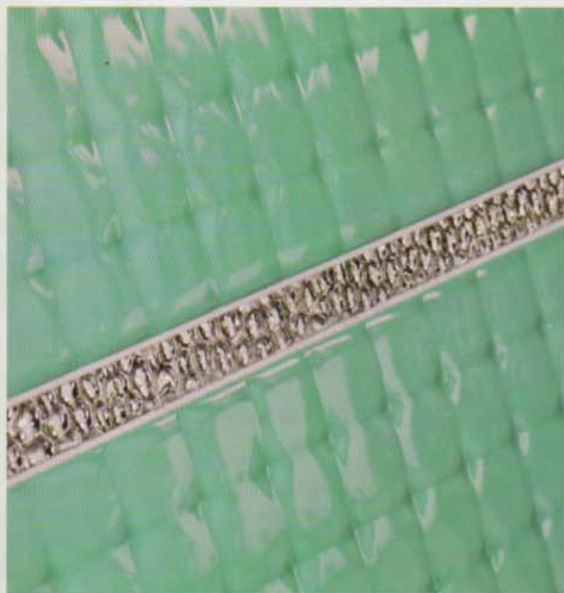
# Tiles & Sanitaryware

The Italian ceramic industry's new products in the image gallery

<http://products.italiatiles.com>



http://products.italiatiles.com



enormous development opportunities and has led to real proposals, some of which are already on the market. These include optimising performance and aesthetic qualities and developing products that are capable of actively countering environmental stresses, help to reduce pollution, control bacteria, have self-cleaning characteristics and much more.

But above and beyond these interesting experiments, it should be noted that the Italian ceramic tile industry has long focused on chemistry. This attention not only includes production aspects and the development of the innovative blends of raw materials that has helped the industry establish its world leading position, but also includes efforts to optimise the characteristics of its products, i.e. their capacity to withstand aggressive substances that accidentally - or due to

the specialist nature of their usage - come into contact with the surface of a tile. What is normally referred to as chemical attack may be either a reaction between the aggressive agent and one of the materials making up the ceramic surface, causing it to be altered, or the absorption of the aggressive agent which therefore becomes extremely difficult to remove. As the experts point out, one positive aspect is the relative inertia of all ceramic surfaces towards chemical agents with the exception of hydrofluoric acid. If they are

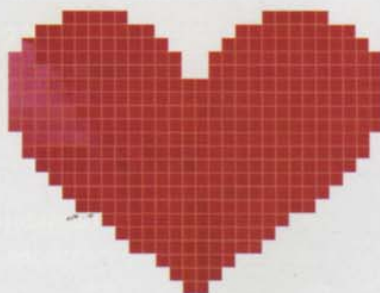
suitably chosen according to the application and correctly installed, ceramic tiles form extremely resistant and durable surfaces, whether they are used on architectural façades, floors or interior walls.

#### FOCUS ON COMPACTNESS

A fundamental aspect for resistance to chemical attack is the degree of compactness of the surface layer of the tile. In practice, absorption - and hence the surface area in contact with aggressive agents - increases in proportion to porosity. Another negative aspect of porosity is its ability to facilitate the deep penetration and embedding of substances, which thus become extremely difficult to remove even if appropriate tools and cleaning products are used.

Glazes that are used on tile surfaces provide an excellent barrier to porosity as they are capable of giving the exposed surface characteristics of compactness and non-absorbency. Glazes generally have high chemical resistance, although care should be taken when choosing products as there is a small family of colours or decorations that may be more sensitive to certain acid substances. Resistance to alkalis is certainly higher.

However, compactness is crucial to the chemical resistance of ceramic products



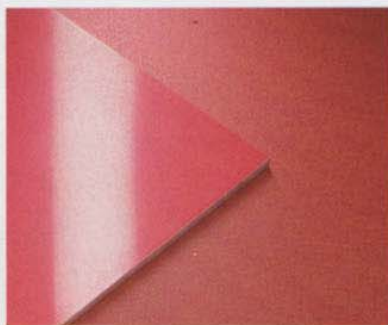
**> Ceramic is relatively inert towards chemical agents with the exception of hydrofluoric acid.**



such as porcelain tile and other types of tiles that are similar in terms of absence of porosity. These ceramic products are manufactured using a production cycle that involves very high temperature firing, giving them significantly higher chemical inertia. Terracotta, an unglazed material with strong appeal and tradition, is a rather different case. It has higher porosity and surface permeability, drawbacks that when used for interior floors are usually offset by means of application in the factory or after installation of special treatment and impregnation cycles that leave the unique textured appearance unaltered. Although these surfaces are notoriously more delicate than those of ceramic products such as porcelain tile or single fired tiles, when protected in this way they are able to withstand chemical attack in accordance with the requirements of many civil and residential applications.

#### THE IMPORTANCE OF JOINTS

Resistance to chemical attack is measured in accordance with standard UNI EN ISO 10545.13, which establishes different methods for glazed and unglazed ceramic tiles. Both methods involve determining the effects of prolonged contact between the test specimen and various liquids, such as acid and alkali solutions. The test not only makes it possible to determine whether



> Glazes offer an excellent barrier to porosity as they provide characteristics of compactness and non-absorbency.

#### > HOW TO WITHSTAND CHEMICAL ATTACK

We recommend the following publications for making an informed choice:

##### > How and why – Buyers' and Users' Guide to Italian Ceramic Tiles

by Giorgio Timellini and Carlo Palmonari,  
Edizioni Edi.Cer. SpA  
([www.italiatiles.com](http://www.italiatiles.com))

##### > Le piastrelle di ceramica sotto controllo (Ceramic tiles under control),

by Carlo Palmonari and Giordana Carani, published by Centro Ceramico Bologna  
([www.cencerbo.it](http://www.cencerbo.it))

the tile is of high quality, but also enables the designer – on the basis of the requirements established by standard UNI EN 14411 (ISO 13006) – to select the most suitable product for use on surfaces exposed to particularly severe chemical stresses, such as those that typically occur in industrial areas, workshops, laboratories, food factories, hospitals, public places, etc.

It should also not be forgotten that the resistance and durability of a tiled surface depends not only on the way in which it is chosen and used, but also on how it is maintained. It is important to know the characteristics not only of the material itself but of all the components that make up the surface, which consists not only of the tiles but also of the joints. In the specific case of chemical attack, frequent use of

highly aggressive acids does not generally have any adverse effect on the tiles themselves but may damage the joints if they are filled with materials that are unsuitable for the conditions of use. An extremely wide range of grouts with both cementitious and epoxy formulations are now available and are able to adequately meet the most varied stresses during use and guarantee perfect installation.

*Alfredo Zappa, Costruire*