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krion®
PORCELANOSA
SOLID SURFACE

K·LIFE

IT'S TIME FOR K LIFE

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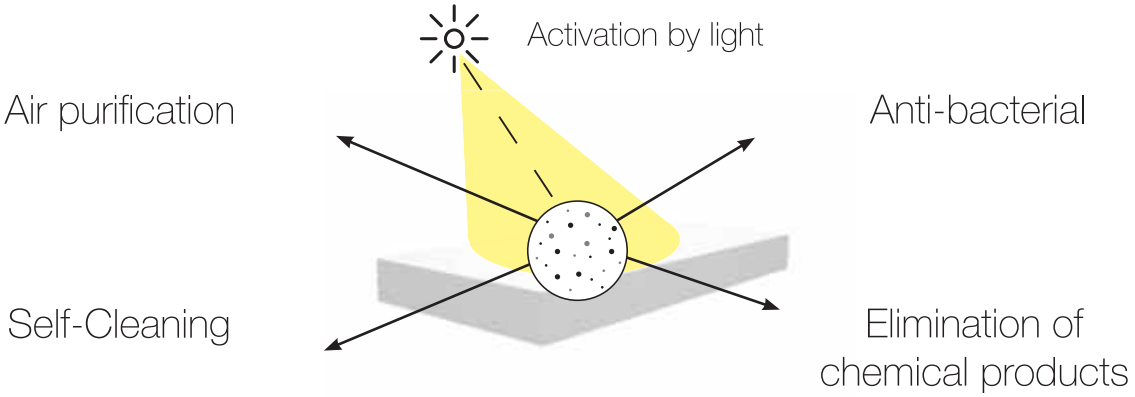
What is Krion Eco-Active Solid Technology™ ?

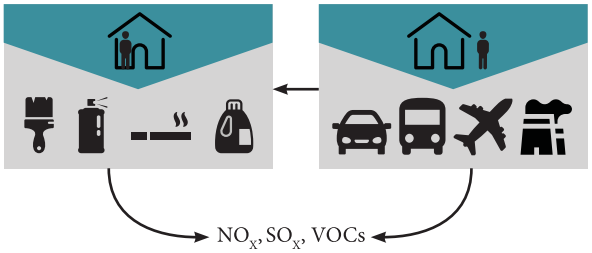
KRION Eco-Active Solid Technology™ is a revolutionary leap that Krion™ has made in the world of the solid surface. This new technology of Krion™ Eco-Active is based on providing the material with multiple new properties, based on the natural phenomenon of photocatalysis. This has led to a patent pending innovative and exclusive product at a global level, integrated with nature, durable over time, and with a direct effect on our quality of life. These new properties of the material do not alter its physical qualities or colour, there are no limits to use, it is not merely a superficial treatment, and does not contain any dangerous components.

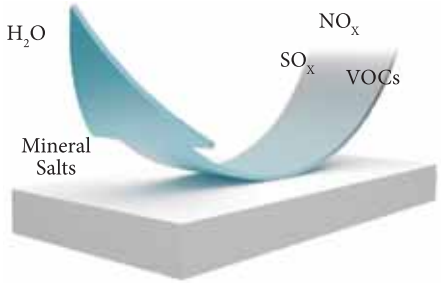
How does it Work ?

The Secret of the new technology presents in Krion™ Eco active Resides in incorporating a series of specially developed Krion™ activators into the product, specially developed by Krion, which when in contact with any type of light, provide Krion™ Eco-Active with the following new properties: Air purification, Anti-bacterial, Self-cleaning and Elimination of chemical products.

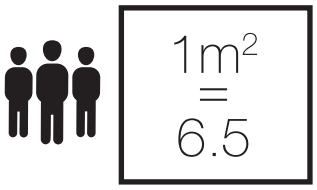


Air Purification





In the atmosphere and in our homes, due to pollution there are certain gases which are dangerous for humans and nature. In particular, these gases are nitrogen oxides (NOx), sulphur oxides (SOX) and volatile organic compounds (VOCs). When any of these gases come into contact with the activated Krion™ Eco-Active surface, there is a chemical degradation, generating harmless products such as mineral salts and water.



It has been accredited in air purification both indoors and outdoors, by ISO. Certification shows that 1 m^2 of the new Krion™ Eco-Active can purify the air for up to 6.5 people for a year.

Interior/Indoor 45m^2 Krion® Eco-Active = 292

Exterior/Outdoor 60 m^2 Krion® Eco-Active = 325

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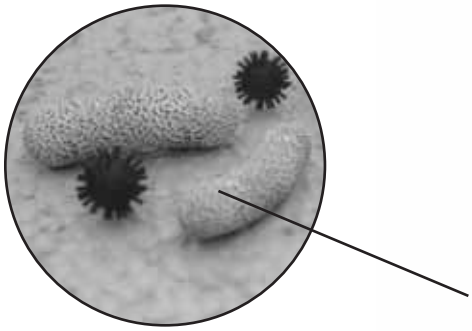
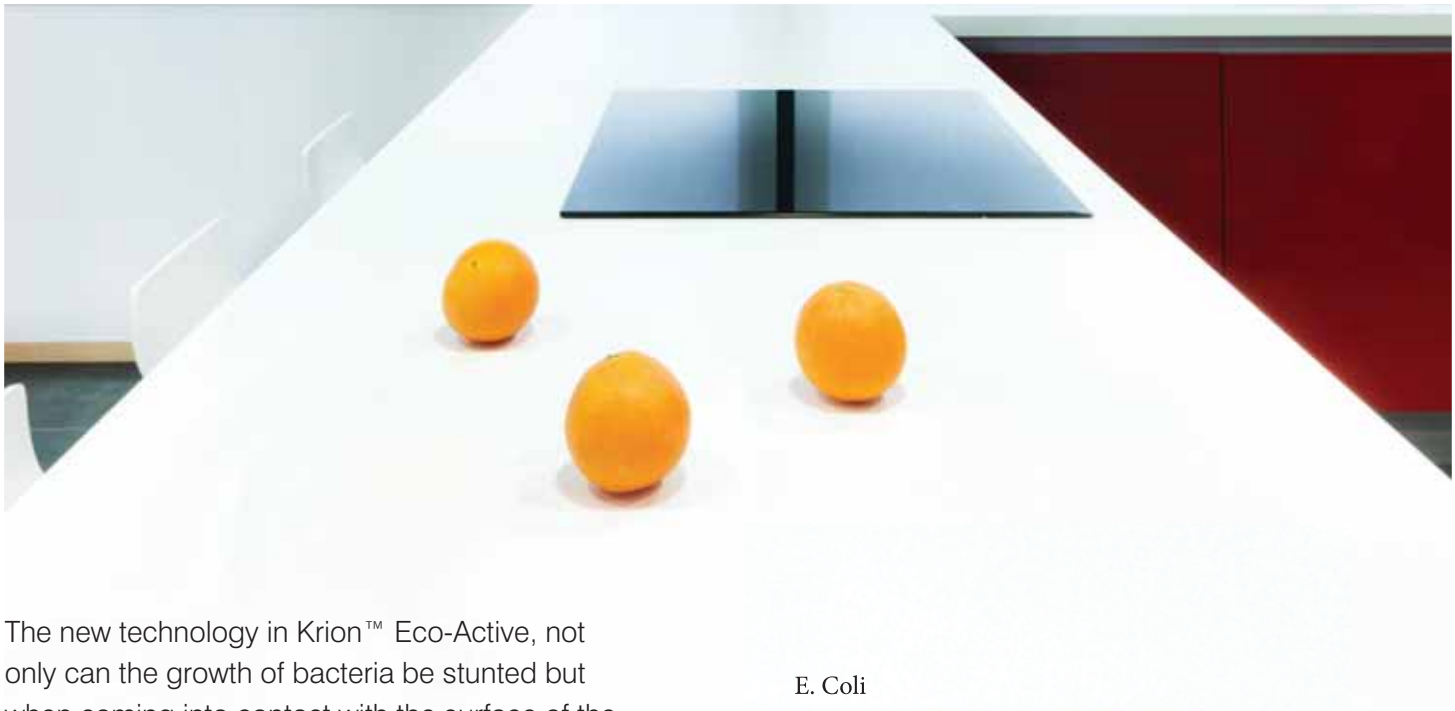
Anti-bacterial

Bacteria is naturally present in our surroundings, tending to form colonies and grow in spaces favourable to them, such as porous materials, joins or surfaces that are difficult to clean. Any bacterium is harmful and can potentially lead to illness dangerous to the development of our health.



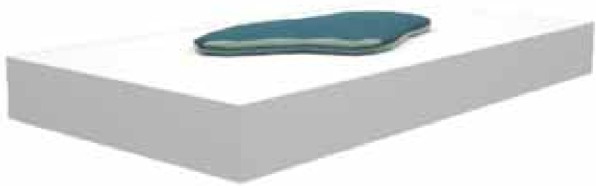


The new technology in Krion™ Eco-Active, not only can the growth of bacteria be stunted but when coming into contact with the surface of the material the bacteria is eradicated. It has been proven that the new Krion™ Eco-Active can eliminate harmful bacteria such as *E. Coli* and *S. Aureus*, up to 117% more than any other material.

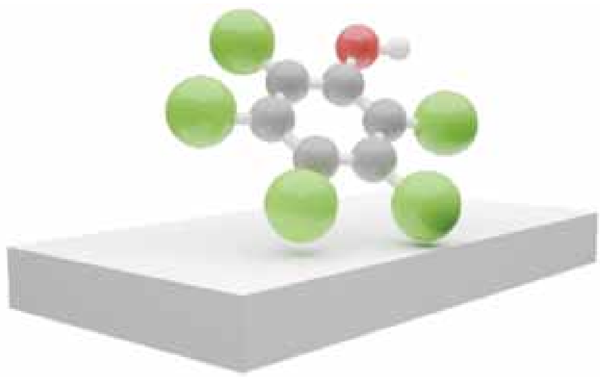
KRION® PORCELANOSA SOLID SURFACE K·LIFE

Self - Cleaning

The revolutionary new technology present in Krion™ Eco-Active, Allows liquids and dirt to be cleaned from the surface of the material with greater ease, reducing the use of detergents.



Elimination of Chemical Products



Through the new technology present in Krion™ Eco-Active a large number of compounds that are dangerous to our health have been eliminated, such as pesticides present in our surroundings, and especially in the foods we consume. It has been accredited that the new Krion™ Eco-Active can eliminate up to 100% of these dangerous compounds on daily basis.

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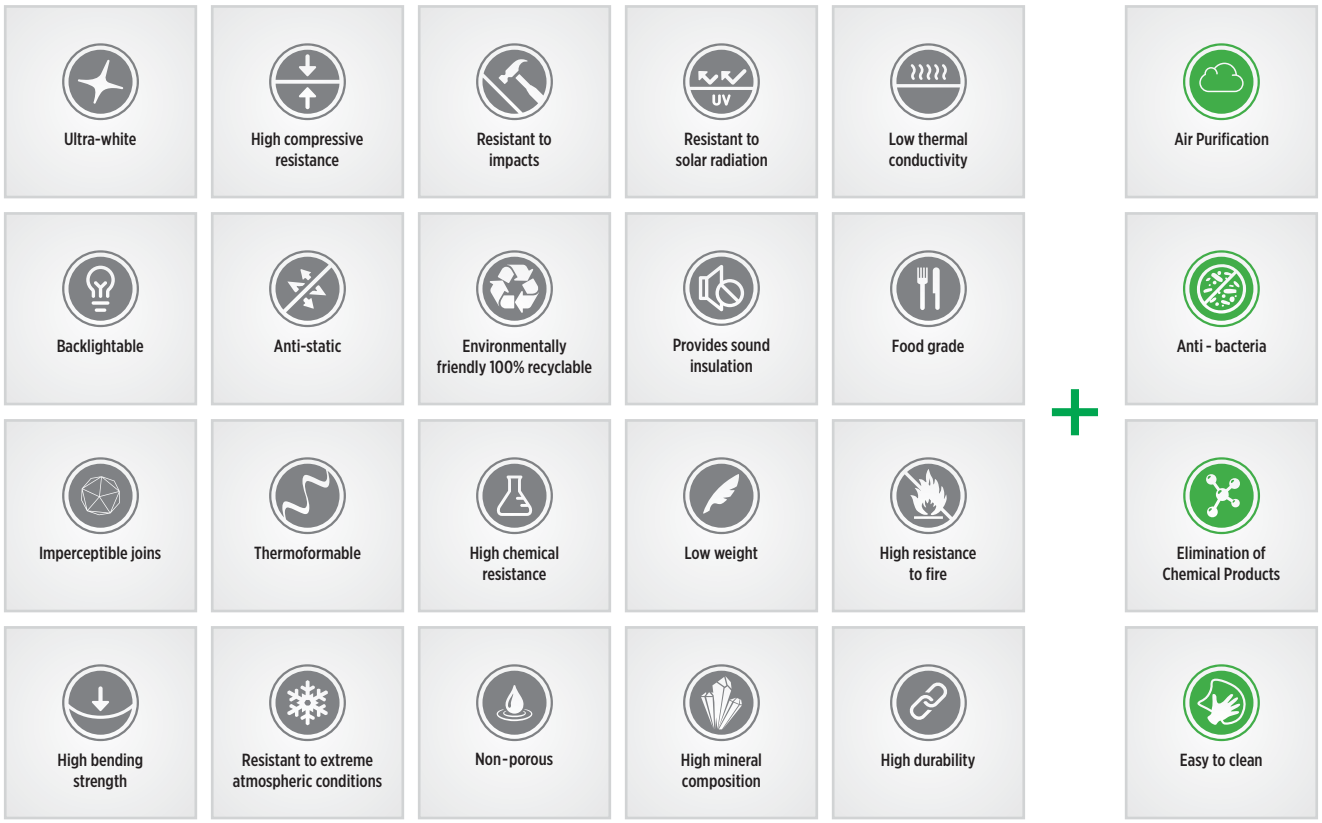
The same Krion™ but with better properties



ISO

ISO 22197
Test methods for air purification performance of semiconductor photocatalytic materials

ISO 27447 : 2009
Fine ceramics, advanced technical ceramics -Test method for antibacterial activity of semiconducting photocatalytic materials

ISO 10678 : 2010
The 'Determination of photocatalytic activity of surfaces in an aqueous medium by degradation of methylene blue'

ISO 27448 : 2009
Test method for self - cleaning performance of semiconductor photocatalytic materials measurement of water contact angle

MORE PROPERTIES…
…MORE POSSIBILITIES, MORE APPLICATIONS

Its different properties combine to make KRION™ an innovative, exclusive material.

Highly resistant to fire
KRION™ product range is considered to be practically fireproof as it does not allow fire to spread. It is classified as **Euroclass B-s1-do** according to the UNE-EN 13501 standard and as B1 (with no restrictions) according to DIN 4102.

Ultra-white
Technically KRION™ achieves a Whiteness of 99.8%, if we combine this with its high Light Reflective Value, we find a pure and luminous material, something unique in Solid Surface materials.

Low thermal conductivity
Thermal conductivity is a physical property, determining a material's capacity to transmit heat. The lower the thermal conductivity, the higher the material's insulative capacity. Using KRION™ on walls or other surfaces contributes to the energy efficiency of rooms or facades. For low thermal conductivity type result is **0.396W/m·K** & type method is **UNE EN 12667.**

Resistant to impacts
KRION™ has the highest capacity to absorb impacts of all solid surfaces. In impact tests using large-diameter balls (324 g) dropped from a height of 1.9 metres, it withstood ten consecutive impacts without breaking, demonstrating its very high resistance. For impact resistance type result is **324 g ball / Height 1.9m (2 m)** & type method is **ISO 19712-2 UNE EN 438-2 /ISO 4586-2 /NEMA LD 3.**

A lightweight material
Because KRION™ has a lower density than other solid surfaces, like high-performance porcelain, artificial quartz or natural marble, it is easier to handle, for instance in the creation of countertops and more lightweight furniture, without relinquishing all the other properties of this solid surface.

Compressive strength
A compression test is a test used to determine a material's resistance or capacity to withstand a certain load without it breaking or becoming deformed. Thanks to its high compressive strength, KRION™ has a compressive performance on a par with stone. These values can be used by designers and/or architects to calculate the design parameters for structures. For compressive strength type result is **97 – 117 mpa** type method is **ISO 604.**

Seamless joints
KRION™ sheets and shapes can be bonded together using bonding kits of a similar composition to KRION™. This guarantees uniform physical and chemical properties throughout

Antibacterial
KRION™ does not allow bacteria or fungi to grow or spread. This is an intrinsic property of the composition of the material, without the need for additives to achieve this permanent effect.

Easy to clean
Any normal stain, superficial burn, graffiti or marker pen stain can be removed, immediately returning the surface to its original appearance simply by following the recommended cleaning instructions.

Backlighting
KRION™ Lux can be used to create backlit spaces. By combining different thicknesses of the material, it is possible to create spectacular lighting effects.

Resistant to sunlight
KRION™ stands out for its remarkable stability when exposed to ultraviolet (UV) rays. The most stable colour is white; please consult the manufacturer for information on other colours. For uv resistant type result is **1.48 AE* (A is for delta)** and type method is **UNE EN 438-2, ISO 4892-3**

A high mineral content
Alumina trihydrate (ATH) is extracted from mineral ore and refined, prior to its use, to ensure a purity of up to **99.8%**.

Non porous
KRION™ is a non-porous material and so it prevents the build-up of bacteria. This makes it ideal for places with strict health and hygiene conditions, such as operating theatres or clean rooms. For non porus type result is **0.03%** & type method is **ASTM D570.**

Thermoformable
KRION™ sheets can be thermoformed to create curves or shapes of varying radii.

Ecological / 100% Recyclable
KRION™ is an ecological material, as it is 100% recyclable. Any product made of KRION™ can be reprocessed and used again in its production process.

Sound insulation
Thanks to its intrinsic physical properties - a seamless, low-density material of varying thicknesses with no pores KRION™ helps to insulate noise. This is due to its density, nil porosity, different thicknesses, and lack of seams. More specifically, if the noise level is reduced by 10 decibels, the human ear hears just half the resulting intensity. KRION™ can reduce the noise level by up to 14 decibels.

Bending strength
Bending strength is a combination of tensile and compressive strength. This type of load can deform materials by making them sag. Many solid materials cannot withstand high loads and they crack. In contrast, KRION™ has a high bending strength. The high bending strength of KRION™, it is easier to transport and it can be used to create aesthetically pleasing overhanging sections and surfaces with higher safety guarantees than other materials. For bending strength type result is **60 – 78** mpa & type method is **ISO 178 / ASTM D790.**

Food grade
KRION™ is a food-grade product and meets **US** and **European standards**, meaning it can be used in contact with foodstuffs.

Resistant to extreme environments
KRION™ surfaces are capable of withstanding extreme environments, such as marine environments, exposure to steam, immersion in water or freezing conditions, amongst others.

Anti-static
Static electricity is a build-up of electrical charges on the surface of a material, sometimes generated by friction with another material. Many materials are classified according to their electrical resistivity. KRION™ is rated as being antistatic and very close to insulative, according to the ESD (Electrostatic Discharge Association).

ETA. EUROPEAN TECHNICAL ASSESSMENT
KRION™ has been awarded an ETA for the K-BOLT system by BUTECH.

The French certiication key to ensure its use in projects such as ventilated facades, which use KRION™ as their main element.

The Health Product Declaration™ (HPD) has been developed for both KRION™ sheets and KRION™ adhesives.

ENVIRONMENTAL PRODUCT DECLARATION (EPD)
KRION™ has an EPD, based on an inventory of quantiied environmental data relating to its products, as per ISO 14040 lifecycle analysis standards.

KRION™ have developed 3 different Environmental Product Declarations (EPD) for our latest material KRION™ SNOW WHITE EAST™ according to the normative ISO 14025 EN UNE 15804 +A1.

BISPHENOL A
Bisphenol (BPA), an organic compound mainly used to make plastics, is thought to be harmful to humans. KRION therefore guarantees that no BPA is included in its formula. To con rm that it is not present in any of the raw materials used to make it, a study to this effect was conducted by an approved external laboratory.

EPD results show how KRION™, thanks to its photocatalytic properties, is a material capable to generate positive impacts in the environment putting this way the architectural worldwide prescribers in an advantageous position for developing sustainable built environments.

The environmental beneits provided by KRION™ Porcelanosa Solid Surface help buildings to achieve a better overall green certiication rating. KRION™ possesses a series of invaluable eco-friendly properties and the most recognized leading certiications that can contribute to the obtainment of different LEED™, BREEAM™, VERDE™ & DGNB™ points.

WELL BUILDING STANDARD
The WELL Building Standard (WELL) marries best practices in design and construction with evidence-based medical and scienti c research – harnessing the built environment as a vehicle to support human health and well-being. This certi cation is managed by the International WELL Building Institute™ (IWBI™) and certi ed by a third party through the collaboration with Green Business Certi cation Inc. (GBCI).

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