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## PORCELANOSA Grupo

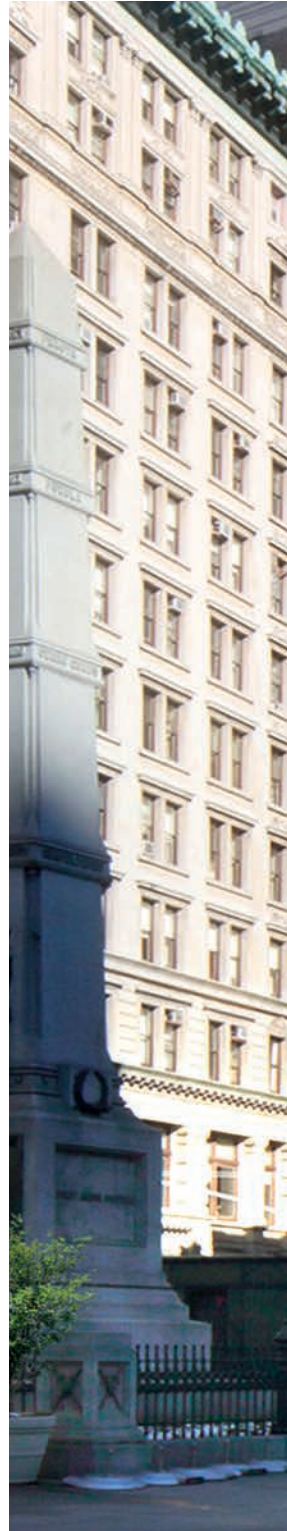
Today, PORCELANOSA Group is a benchmark company in the national and international market, based on values such as innovation and quality but, above all, based on the trust placed in its extensive human team, made up of almost 5,000 people, and on the attention to its social environment.

With more than forty years of experience, the PORCELANOSA Group is present in nearly 150 countries around the world, thanks to its unique business model and strategy. It is currently one of the most recognized Spanish companies worldwide, according to a study published by the consulting firm Pricewaterhouse Coopers and the Financial Times and consumers also consider it to be a strong, robust company, according to a study carried out by the Reputation Institute.

Diversification in production has been a fundamental pillar in the growth of a business group that began exclusively with the manufacture of tiles. Today, the Group's eight companies offer a wide range of products, ranging from kitchen or bathroom equipment to technological materials and advanced building solutions for contemporary architecture.

PORCELANOSA Group has experienced constant turnover growth as a result of its skillful economic and financial management. This has allowed it to remain one of the most solid companies in the market both nationally and internationally.

## **PORCELANOSA GRUPO IS PRESENT IN NEARLY 150 COUNTRIES**







# Krion

PORCELANOSA Grupo

Krion PORCELANOSA Group is one of the 7 companies belonging to the PORCELANOSA Group company and, under the umbrella of this great brand, we have grown to become a benchmark company present in more than 970 stores spread over five continents and a distribution network that continues to expand day by day in cities such as New York, Milan, London or Paris.

At Krion PORCELANOSA Group, we manufacture improved surfaces that meet people's needs through aesthetic, functional and sustainable solutions.

We create, design, develop, produce and market materials composed of minerals and high-performance resins (mineral composites) in the form of panels, sheets, semi-finished products and sanitary equipment. Materials with multiple applications in the field of construction, architecture and design for our customers to explore new ways to improve their quality of life.

Environmental commitment and responsibility are key aspects of our growth and, as with our product, we are involved in obtaining, optimizing and improving all the properties that help preserve the environment and the search for an improvement in society's quality of life through actions that reduce the impact of production on the environment. Therefore, we create solid surfaces, decorative panels, countertops, claddings and bathroom equipment in a sustainable and environmentally friendly way while maintaining the aesthetics, quality and design of the company.





INNOVATING FOR THE FUTURE





## THE ARRIVAL OF THE SOLID SURFACE

This is a solid surface formed by a high mineral load, ATH: Alumina Trihydrate, and a low percentage of acrylic resin. Thanks to its composition, it can be worked in a similar way to wood, it is thermoformable and its union with imperceptible joints allows for unique and unlimited designs that adapt to any space or design. Its technical characteristics give it great strength, durability and almost no porosity, making it easy to repair, clean and maintain, and positioning it as one of the materials at the service of markets as diverse as commercial premises, supermarkets, hotels, offices, customer service facilities, health centers, laboratories, public spaces, and transport services. This has encouraged developers, contractors, transformers, industrialists, architects, and interior designers to improve society at an aesthetic, practical and sustainable level.

With more than 95 models, some of them with percentages of recycled or backlit material, highly customizable and colorful spaces can be created.

Krion® Lux has low levels of volatile organic compounds (VOCs), ensuring safe and healthy surfaces for our customers to explore new ways to improve their quality of life.

In addition to all this, Krion® Lux is an eco-friendly material, as it can be fully recycled. Any product made with Krion® Lux can be reprocessed and used again in its production cycle.



# PRODUCT LINE

## SHEETS

Krion® Lux is available in sheets of various formats and thicknesses. The dimensions of the sheets go from 3, 6, 9, 12 and 19 mm in thickness and size between 3680x1520, 3680x1350, 3680x760, 2500x1350x2500x930 and 2500x760 mm, depending on the color of the sheet.

Krion® Lux has more than 95 models in its color palette, some of them with percentages of recycled material. Krion® Lux can adapt to any design and project providing it with a great capacity for customization of spaces thanks to its versatility. Its versatility is such that it can be texturized, images can be sublimated on its surface and many of its models can be backlit to create highly customizable spaces that are full of character. It can be used as cladding, furniture, or backlighting, allowing highly customizable spaces that are full of character to be created.

**Krion® Lux provides a wide variety of formats, offering greater possibilities for the transformation and efficiency of our products by making the best use of the material.**

## ADHESIVE

Krion has developed its own adhesive, one specific to each model, creating an imperceptible chemical bond between the sheets that is resistant to heat bending and stress.

## SEMI-FINISHED PRODUCTS MADE THROUGH CASTING

Krion offers a series of semi-finished products made by casting, such as washbasins, sinks, shower bases and bathtubs, all of which benefit from the properties of Krion® Lux.





## KRION® LUX PROPERTIES

The technical qualities of Krion® Lux make it a wonderful alternative that can meet the demands of any project.



### COMPACT MINERAL

This material is composed of two-thirds natural minerals and a low percentage of high-strength resins.



### INTENSE WHITENESS

At a technical level, Krion® K-Life 1100 reaches a whiteness level of 99.8%, which, in combination with its high reflectance index, gives rise to a luminous and pure material, something unprecedented in solid materials.



### THERMOCURVING

Krion® Lux sheets are thermo-moldable and curves and figures of different soft radii can be generated using this technique.



### IMPACT RESISTANT

Krion® Lux is subjected to various physical tests, including impact resistance, in which it excels. This test—carried out 10 consecutive times, from 1.9m, involving throwing a metal ball of more than 300g onto a surface of Krion® Lux—demonstrates the ability to withstand impacts without breaking.

Hard and tough | ISO 19712



### EASY TO CLEAN

The characteristics of Krion® Lux make it easy to clean against common stains. Provided our cleaning instructions are followed, its surface will be completely clean.

NEMA LD3 | ISO19712



### SUITABLE FOR USE IN CONTACT WITH FOOD

Krion® Lux is suitable for use in contact with food, as it complies with North American and European regulations.

NSF-51 | 10/2011 Regulation



### ALMOST ZERO POROSITY

Krion® Lux is a non-porous material, thus hindering the accumulation of bacteria. This property makes it ideal for environments with high hygienic-sanitary requirements such as operating room rooms or clean rooms.

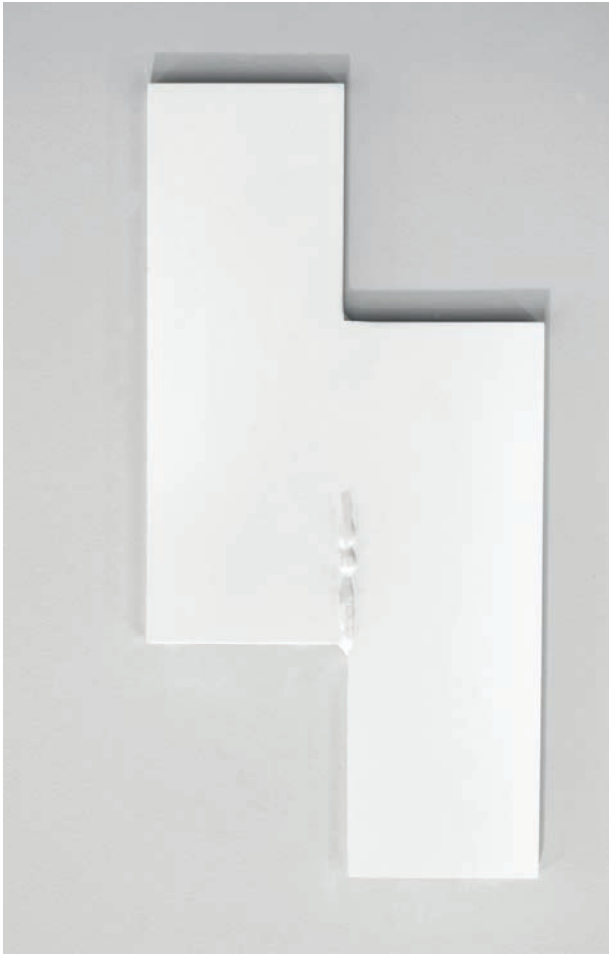


### BACTERIOSTATIC

Krion® Lux does not allow bacteria or fungi to proliferate or grow on its surface. This property is intrinsic to the composition of the material and no supplementary additives are required to achieve this permanent effect.

ASTM G21 | ISO 846





### RESISTANT TO BENDING AND COMPRESSION

Krion® Lux has high bending strength values that make it easier to work and transport. Unlike many solid materials, Krion® Lux withstands high stress and does not crack. In addition, its high compressive strength value makes it similar to materials such as stone, which are excellent at withstanding deformation or breakage when subjected to compressive stress.

ISO 178



### IMPERCEPTIBLE AND THERMOFORMABLE JOINTS

Krion® Lux casting figures and sheets can be bonded together using Krion® adhesive, which ensures perfect bonding in terms of aesthetics, safety and durability. This union with imperceptible joints allows continuous and infinite spaces and surfaces to be created. Another of the virtues of the material is its thermoforming capacity. Using a Krion® Lux heating procedure, it can be modelled in 2D and 3D, obtaining a wide range of curvature without losing tonality or cracking, recovering its physical performance after cooling.

These qualities allow the material to be easily adapted to spaces and designs, and its applications are endless.

**Adhesives with a tensile strength of 18 MPa  
It maintains its properties when it is thermoformed**



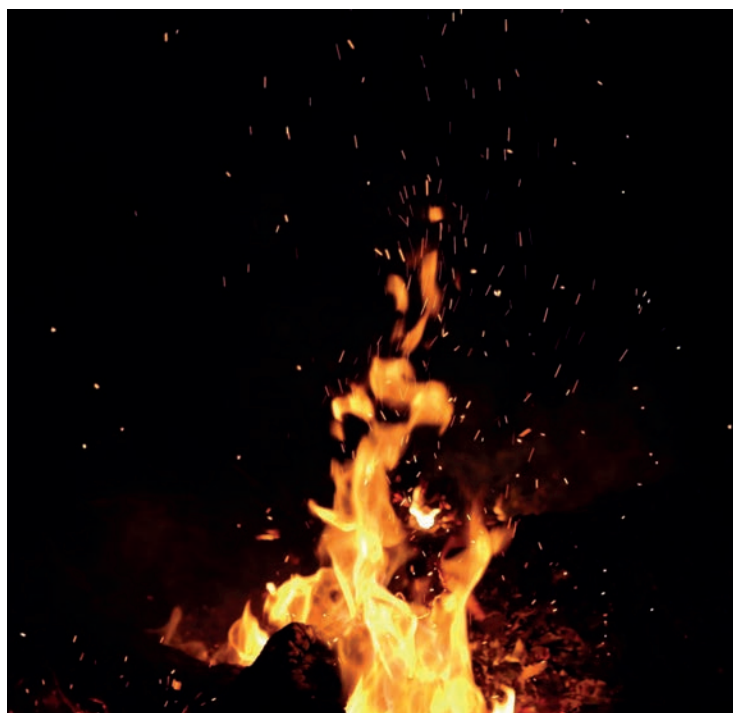




### EXCELLENT PERFORMANCE AGAINST EXTREME ENVIRONMENTS AND SOLAR RADIATION

The composition of Krion® Lux gives it great resistance against ultraviolet radiation and the action of weather events. Its excellent performance against the weather prevents its deterioration, maintaining stability that allows it to be installed outdoors as cladding for façades or other outdoor projects, following the suitability of the classification of colors for this use.

Seismic resistance, frost resistance, saline environments...



### HIRE FIRE RESISTANCE

The Krion® Lux family of products has a high resistance to fire because it does not allow fires to be spread; classified according to UNE-EN 13501 as Euroclass B-s1-d0 and B1 (without restrictions) according to DIN 4102.

UNE-EN 13501 (B S1-d0) | NFPA 101 (Class A) | ASTM E84



### RESISTANT TO THE PASSAGE OF TIME AND REGENERABLE

Krion® Lux suffers very little wear over time and is scratch and cut-resistant. It is very simple to clean and can be easily repaired. Before any intense stain or superficial burn, the material can be returned to its original state by performing minimum maintenance following our cleaning and/or regeneration instructions. Being a full-mass material that is homogeneous all the way through, in case of more serious damage, Krion® Lux can be repaired or regenerated by a professional to return it to its original state without the need for a complete replacement of the element created with Krion® Lux.







### LOW THERMAL CONDUCTIVITY

Thermal conductivity is a physical property of materials that measures heat conduction capacity.

The lower its thermal conductivity, the more insulating a material will be. Using Krion® Lux on surfaces or claddings contributes to the energy efficiency of any room or façade.

**0,19 W/mK**

Conductivity similar to wood | ISO 12667



### ECOCYCLE®

For some time now, products in the Ecocycle® range have been developed. In this production process, we make use of remains and production losses of other sheets for the manufacture of chips that are used in the manufacture of new models, maintaining the same technical standards and product quality.

Krion® Lux has more than 35 models with a minimum recycled material content of 6%, 12%, 20% and 40% in its color palette, certified by SCS Global Service.



### ECO-FRIENDLY AND REUSABLE

Krion® Lux is responsible for the environment since its safety does not affect the biosphere, in addition to being a 100% reusable material.

Due to its composition, this material can be reprocessed and used again once its life cycle is over.

DAP | SCS Recycled Content | GBCe



### LIGHTWEIGHT

Krion® Lux has a lower density compared to other materials, which allows lighter furniture, claddings and countertops to be created without altering its technical properties.



### BACKLIGHT

Krion® Lux allows backlit environments to be created. Combining different thicknesses of the material can achieve spectacular lighting effects in addition to providing projects with greater customization power.



### ACOUSTIC INSULATOR

The technical and physical characteristics of Krion® Lux contribute to promoting sound insulation. Considering that sound intensity is a logarithmic magnitude, a small reduction in dB can make a noticeable difference in our perception of noise. Specifically, if we reduce this by 10 dBA, the human ear perceives it as if it were half. Krion® is capable of insulating up to 33.5 dBA.

**33,5 dBA**



### ANTISTATIC

Krion® Lux electrical resistance classifies it as an antistatic material, close to the insulation range, according to the standards set by the EDA (Electrostatic Discharge Association).





## CREATE AND DESIGN YOUR IDEAS

Creativity at the disposal of designers; this is what Krion® Lux offers to professionals.

Its well-known technical and physical characteristics give it the ability to customize and adapt any project and space, obtaining unique and functional results.

Valid for installation in any space or sector, Krion® Lux always offers versatility and infinite creative possibilities with distinctive technical characteristics and high-quality standards.

For these reasons, Krion® Lux is the solid surface of choice for architects, designers and interior-design experts to carry out their creations, since it has qualitative support and infinite possibilities.



### THE WORKING MATERIAL PAR EXCELLENCE

With Krion® Lux designers can take advantage of all the physical and technical characteristics that this material offers to develop their projects.



### PROFESSIONAL ADVICE

Made up of a team of architects, technical architects, industrial engineers and designers, we specialize in studying and monitoring the different projects carried out with Krion® Lux, collaborating with the designers to find the optimal solution for each project and developing new solutions.



### A RANGE OF POSSIBILITIES

Krion® Lux facilitates the development and creation of any design adapting to spaces with continuous surfaces thanks to its flexibility and ability to be attached with no visible joints.



### SUITABLE FOR ALL SPACES

Krion® Lux has been designed to be installed in the health, hospitality and residential sectors as well as in façades. The resistance and durability offered by this material, together with its easy repair and maintenance, high design capacity and bacteriostatic character, make it suitable for any space, meeting all the expectations of commercial consultants and clients.



### CUTTING-EDGE MATERIAL

Krion® Lux is a material at the forefront of the prevailing trends today. The ideal material in the field of creating stylish spaces.



# SECTORS AND APPLICATIONS

Krion® Lux is a surface designed for creating. Thanks to its exceptional performance qualities, it is suitable for both commercial and residential environments. That is why Krion® Lux has been chosen by professionals to create all kinds of furniture, work surfaces, counters, and exterior and interior claddings for use in projects for commercial premises, hotels, restaurants, hospitals, clinics, public buildings, airports, and public transport stations. Krion® Lux is also an excellent choice for use in homes.

Professionals trust Krion® Lux because of its durability properties, functionality, excellent efficiency/cost ratio, ease of repair and the fact that it requires little maintenance. All of this makes it an ideal material for highly frequented areas and intense use and makes projects made with Krion® Lux look their best for longer.



## COMMERCIAL PREMISES COMPANIES

- Shopping centers.
- Duty-free areas
- Supermarkets
- Supply shops
- Specialized food stores
- Clothes
- Shoe shops and accessories
- Cosmetics, perfume shops, and pharmacies



COMMERCIAL  
FURNITURE  
DISPLAYS  
COUNTERS



FURNITURE  
OFFICE AND  
COUNTERS



WORKTOPS



WALL CLADDING



SIGNS



COMMON  
BATHROOMS



## HOTELS

- Hotels
- Resorts
- Hostels
- Motels
- Apart-hotel
- Boutique Hotel
- Country houses



FURNITURE  
ROOMS



FURNITURE  
BUFFET  
RESTAURANT



BATHROOMS  
ROOMS



WORKTOPS



COMMON  
BATHROOMS



SIGNS



WALL  
CLADDING



FURNITURE  
OFFICE AND  
COUNTERS



## RESTAURANTS CAFES

- Restaurants
- Cafes
- Ice cream parlors and yogurt shops
- Bakeries and pastry shops
- Leisure venues
- Fast food restaurants
- Service Stations



FURNITURE  
BUFFET  
RESTAURANT



WORKTOPS



COMMON  
BATHROOMS



SIGNS



WALL  
CLADDING



## CUSTOMER SERVICE OFFICES/ CORPORATE BUILDINGS

- Banks
- Savings banks
- Insurance companies
- Vehicle-rental offices



FURNITURE  
OFFICE AND  
COUNTERS



COMMERCIAL  
FURNITURE  
DISPLAYS



WORKTOPS



WALL CLADDING



SIGNS



COMMON  
BATHROOMS



## HEALTH CARE

- Hospitals
- Primary care clinics
- Specialized clinics
- Special-attention residences
- Elderly communities



CLINICAL  
FURNITURE



WALL CLADDING



WORKTOPS  
SINKS



SINKS  
SURGICAL



BATHROOMS  
ROOMS



COMMON  
BATHROOMS



WALL CLADDING



## PUBLIC BUILDINGS AND EDUCATION CENTRES

- Schools
- Academies
- Nurseries



FURNITURE  
OFFICE AND  
COUNTERS



COMMERCIAL  
FURNITURE  
DISPLAYS



COMMON  
BATHROOMS



WALL CLADDING



SIGNS



## TRANSPORTATION

- Leisure ships
- Cruises
- Interior of trains
- Caravanning



FURNITURE  
OFFICE AND  
COUNTERS



WALL CLADDING



COMMON  
BATHROOMS



SIGNS



## HOUSING DEVELOPMENTS



WORKTOP  
KITCHEN



BATHROOM



FURNITURE  
DÉCOR



WALL CLADDING



## INDUSTRIAL PRODUCTS



FURNITURE



APPLIANCES



WALL CLADDING



SOLID SURFACE IS THE OPTION  
PREFERRED BY THE MAIN  
INTERNATIONAL FRANCHISES, AS IT  
CAN BE EASILY INTEGRATED  
AND CUSTOMIZED

## COMMERCIAL PREMISES AND SUPERMARKETS

Krion® Lux opens up a range of possibilities in the design of commercial spaces and is key to properly conveying a company's image and offering the best presentation for each product.

Krion® Lux offers us endless possibilities in commercial décor, with an extensive color palette and the possibility of joining and bending sheets to achieve genuine combinations of colors and shapes.

### APPLICATIONS



CARREFOUR EXPRESS/ Madrid - Spain  
Architecture: Cimbra Arquitectos





ZEISS VISION CENTER ALTO LAS CONDES/ Santiago de Chile - Chile  
Architecture: Pablo Bascur - Photography: Benjamin Vilella



BIOTHERM / Shanghai - China



LA CALA PHARMACY / VILLOJOYOSA - Spain  
Interior Design: Inside Pharmacy - Photography: Inside Pharmacy





## HOTELS

Its wide design possibilities allow it to be used both in hotel halls and rooms, including in furniture, décor and bathrooms.

Krion® Lux also offers great possibilities thanks to its zero porosity and antibacterial properties.

ONLY BY CHOOSING APPROPRIATE MATERIALS WHEN DESIGNING AND DEVELOPING A HOTEL CAN WE ENSURE THE HIGHEST QUALITY AND COMFORT FOR USERS

## APPLICATIONS



ISLANTILLA BEACH GOLF RESORT / Huelva - Spain  
Architecture: Fraile Project - Interior Design: Mónica Fullana



HOTEL FRANCISCO I / Madrid - Spain



HOTEL SILKEN PUERTA AMÉRICA / Madrid - Spain  
 Architecture: Gälow



HOTEL MONTEMAR MARITIM / Barcelona - Spain  
 Interior Design: Rosa Colet Design - Photography: Lluís Valcárcel



THE PROPERTIES OF KRION® MAKE  
THIS MATERIAL THE IDEAL AESTHETIC  
AND FUNCTIONAL SOLUTION FOR  
RENOVATION PROJECTS



## RESTAURANTS AND CAFETERIAS

The comfort and warmth of the material make Krion® Lux an ideal element for the interior design of catering establishments. The ease with which it can be cleaned and maintained makes it ideal for use in restaurants. Its strength, design versatility and its antibacterial properties allow it to be applied in virtually any way.

## APPLICATIONS



LA BOCA TE LIA / Murcia - Spain  
Interior Design: Vcmv Arquitectura Interior - Photography: Victor Coll





SELFRIDGES & CO / London - United Kingdom  
Interior Design: Dalia Dajani



RELISH PASTRY / Catanzaro - Italy  
Architecture: Barbaro18 - Photography: Luce Catanzariti



SOON GRILL / Paris - France  
Architecture: Aev Architecture - Photography: Jean-Michel Da Fonte



THE RIGHT MATERIAL FOR  
CONTINUED USE IN  
COMMUNITY SPACES,  
PERFORMING VERY WELL  
IN SITUATIONS INVOLVING  
LARGE NUMBERS OF PEOPLE

## OFFICES AND CUSTOMER SERVICE

Krion® Lux provides many advantages, both at a technical and operational level, which are the best solution for any installation you want to perform, from public and highly frequented places (halls, receptions, shops) to quieter, more private spaces (offices, meeting rooms, etc.), but they are always highly functional and of excellent quality.

### APPLICATIONS



IHU / Strasbourg - France  
Architecture: S&Aa





CAPITAL ONE / New York - USA  
 Architecture: Tpg Architecture



VIBENDO / Elche - Spain -  
 Architecture: Behind - Photography: Pittaluga Fotografia



CHICAGO MERCANTILE EXCHANGE / Chicago - USA  
 Architecture: Krueck + Sexton Architects - Photography: Imagen Subliminal





THE EXCELLENT PERFORMANCE  
OF KRION® LUX AGAINST CHEMICAL  
ATTACKS MAKES IT IDEAL FOR USE IN  
LABORATORIES

## HEALTHCARE AND LABORATORIES

Krion® Lux is a material suitable for use in medical facilities. Due to its antibacterial properties and its additive-free composition, it is a recommended material both in medical consultations and in hospital rooms, treatment rooms and even operating rooms, where stringent hygienic conditions must be met.

In addition, the chemical welding between the different components and the fact that they can bend allow us to create continuous surfaces, with no joints or corners where micro-organisms might accumulate.

## APPLICATIONS



HOSPITAL UNIVERSITARIO / A Coruña - Spain  
Architecture: Casa Solo Arquitectos - Photography: Arume Fotografía



HOSPITAL VETERINARIO CONSTITUCIÓN / Valencia - Spain  
 Architecture: Dobleese Space & Branding - Photography: Adolfo López



CLÍNICA CETA / Madrid - Spain  
 Architecture: Miguel Ángel Rodríguez Díaz

AFTER BEING HEAVILY STAINED,  
THE MATERIAL CAN BE IMMEDIATELY  
RETURNED TO ITS ORIGINAL STATE  
BY SIMPLY FOLLOWING THE  
RECOMMENDED CLEANING  
INSTRUCTIONS



## PUBLIC BUILDINGS AND EDUCATIONAL SETTINGS

Krion® Lux is particularly suitable for use in public spaces with a large number of users. It meets the most stringent hygienic requirements for installation both in public bathrooms and in other common areas. Its zero porosity, ease of cleaning and the possibility of on-site repair make it the ideal material for continuous use in community spaces, performing to a high standard even when it has been vandalized.

## APPLICATIONS



ARTDENTECK / Lyon - France  
Architecture: Selima Zanetti- Colleoni Kentaurus & Agenda | Ida - Photography: Rouveure Marquez





CASTELLANA 52 / Madrid - Spain  
 Architecture: A&P Arquitectura - Photography: Victor Sáhara



CLUB DE TENIS VALENCIA / Valencia - Spain  
 Architecture: Bfm Edificatoria - Photography: German Cabo

DURABILITY, PERMEABILITY,  
RESISTANCE TO BAD WEATHER,  
CORROSION AND THE ABILITY TO  
ADAPT TO THE PROJECT



## TRANSPORTATION

Its durability, permeability, resistance to bad weather and corrosion, and ability to adapt to any project make Krimon® Lux an ideal material for use in the transport sector.

## APPLICATIONS



AEROPORTI DI ROMA / Roma - Italy





BORDEAUX AIRPORT/ Bordeaux - France  
 Architecture: Roland Gault - Photography: Jérémie Petit | Sa Adbm.



MILANO- LINATE AIRPORT / Milan - Italy  
 Photography: Vincenzo Tambasco



FUTURA / Mexico City - Mexico  
 Architecture: Studio Starq - Interior Design: Studio Starq





## HOMES

Home interiors display the style and soul of each and every homeowner, and, with Krion® Lux, you will achieve a home that is not only comfortable and functional but also unique and personal.

The countless possibilities offered by Krion® Lux mean it can be used in all rooms of the house: living rooms, kitchens, bathrooms, bedrooms and furniture.

THE UNIQUE COMBINATION OF  
AESTHETIC AND TECHNICAL  
CHARACTERISTICS MAKES KRION®  
LUX THE IDEAL SOLUTION  
FOR YOUR HOME

## APPLICATIONS



LA CASA DE CRISTAL / Bordeaux - France  
Architecture: Marraud E (Ngeneering Agen) - Interior Design: Agora Bordeaux - Photography: Stéphane Adam



MADRESELVA / Salina - Spain  
 Architecture: David Olmos Arquitectura - Photography: Ivo Tavares Studio



BARIDHARA IBS ABIANA RESIDENTIAL / Dhaka - Bangladesh  
 Architecture: Studio Morphogenesis



AC33 / Valencia - Spain  
 Architecture: Erre Arquitectura - Photography: David Frutos



BY APPLYING THE LATEST  
ADVANCES IN PRODUCTION  
PROCESSES, WE CAN INJECT  
THE MATERIAL TO REPRODUCE  
COMPLEX FIGURES

## DESIGN

Only a material like Krion® Lux can successfully transform ideas into realities. All that matters is what you want to achieve. Krion® Lux is a way to get there.

## APPLICATIONS



THE WHITE BOW / Picassent - Spain  
Architecture: On Side - Photography: Alfonso Calza





EDILBI SUISE / Sankt Moritz - Swiss  
Interior Design: Fabio Gianoli - Photography: Lisa Pedrini



RESIDENTIAL BUDVA / Budva - Montenegro  
Architecture: Branislav Mitrovic and Jelena Kuzmanovic - Photography: Slaven Vilus



## TECHNICAL SPECIFICATIONS

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The technical characteristics of KRION®—compliant with the pertinent regulations—are detailed below. In addition to these, KRION® also holds certifications such as NSF<sup>(1)</sup>, Greenguard<sup>(2)</sup>, SCS<sup>(3)</sup>, and fire resistance certifications such as B-s1-d0<sup>(4)</sup>, B1<sup>(5)</sup> (Germany), or UL94HB<sup>(6)</sup> and NFPA 259<sup>(6)</sup> (United States). And also the special hygiene and fire<sup>(7)</sup> certificates demanded by the Russian market, the certification of the National Test Center of Polymer and Building Materials, CSTB<sup>(8)</sup> (France) for façades, and European Reach<sup>(9)</sup>, among others.



# TECHNICAL SPECIFICATIONS

Krion® Porcelanosa Solid Surface is a material that is pleasant and warm to the touch, similar to natural stone. It is composed of two-thirds natural minerals (ATH) and a low percentage of high-strength resins. This composition gives Krion® several unique properties: it is pore-free, durable, high strength and easy to repair, requiring low maintenance and easy cleaning. Krion® has been classified according to its fire performance as Euroclass B s1 d0 without restrictions according to EN 13501-1, B1 based on DIN 4102 and "Class A", according to the American ASTM E84 standard. It has also been declared non-toxic by external laboratories and VOC emissions, classified as A+ and Greenguard Gold by UL, holder of ANSI 51 "Food Equipment Materials", certified by NSF, REACH compliant by SGS and free of SiO2 and Bisphenol A.

**Table 1. Mechanical, structural and safety properties**

| PROPERTY                               | TEST METHOD                            | RESULT  |
|--|--|---|
| Bending module                         | ISO 178 / ASTM D790                    | 9.000 - 12.000 MPa  |
|  |  | 1.300.000 - 1.740.000 psi   |
| Resistance to bending                  | ISO 178 / ASTM D790                    | 62 - 80 MPa   |
|  |  | 9.000 - 11.600 psi  |
| Elongation to break when bending       | ISO 178 / ASTM D790                    | 0,6% - 1,20 %   |
| Traction module                        | ISO 527 / ASTM D638                    | 9.500 - 11.500 MPa  |
|  |  | 1.370.000 - 1.670.000 psi   |
| Tensile strength                       | ISO 527 / ASTM D638                    | 40 - 50 MPa   |
|  |  | 5.800 - 7.300 psi   |
| Elongation at break in traction        | ISO 527 / ASTM D638                    | 0,6% - 0,9%   |
| Compressive strength                   | ISO 604 / ASTM C365                    | 98 - 115 MPa  |
|  |  | 14213 - 16679 psi   |
| Impact resistance per ball             | ISO 19712-2 (324 g) / NEMA LD3 (224 g) | > 200 cm  |
| IZOD Impact resistance                 | ISO 180 / ASTM D256                    | 3,9 KJ/m²   |
|  |  | 4,2 KJ/m²   |
| Slip resistance (pendulum method)      | UNE 12633                              | (Sandpaper finish <sup>1)</sup> : grain 40 - 1000<br>USRV: 48 - 9 |
| Slip resistance (friction coefficient) | ASTM C1028                             | Dry static coefficient: 0.8-0.69                                  |
|  |  | Wet static coefficient: 0.82-0.62                                 |
| Load test                              | ISO 19712-2                            | Passed  |
| Dimensional stability at 20°C          | ISO 4586-2 / NEMA LD3                  | Passed  |
| Resistance to cracking                 | UNE 432-2                              | Successful  |
| Frost resistance                       | ISO 10545-12                           | Passed  |

**Table 2. Physical properties, use and durability**

| PROPERTY                               | TEST METHOD                           | RESULT                                  |
|--|---------------------------------------|---|
| Density                                | ISO 1183 / ASTM D792                  | 1,65 - 1,85 g/cm³                       |
| Rockwell hardness                      | ISO 19712 (UNE-EN 2039-2) / ASTM D785 | > 90                                    |
| Barcol hardness                        | ISO 19712 / ASTM D2583                | 65-70                                   |
| Ball hardness                          | ISO 19712 (UNE-EN 2039-1)             | 250 - 290 N/mm²                         |
| Thermal expansion                      | ISO 11359-2 (EN 14581) / ASTM D696    | 3,5±0,3-10-5 °C-1                       |
|  |                                       | 1,9±0,3- 10-5 °F-1                      |
| Deflection time under load 1.82 N/mm²  | ISO 75 / ASTM D648                    | 95-105 °C                               |
|  |                                       | 203-221 °F                              |
| Thermal conductivity                   | EN 12667 / ASTM C518                  | (0 °C - 40 °C) 0,10 - 0,22 W/m· K       |
| Resistance to dry heat                 | ISO 19712                             | Successful                              |
| Resistance to wet heat                 |                                       |   |
| Resistance to cigarettes               |                                       |   |
| Thermal shock resistance               |                                       |   |
| High temperature resistance (dry heat) | NEMA LD3                              | Successful                              |
| Wear resistance                        | ISO 4586                              | 0,028 %/25 rev                          |
| Resistance to boiling water            | ISO 4586 / NEMA LD3                   | Successful                              |
| Water absorption                       | ASTM D570                             | 0,02% - 0,04%                           |
| Light stability (Xenon Arc) (3000 h)   | UNE-EN 438 / ISO 19712 / ASTM G155    | Successful                              |
| Color stability                        | NEMA LD3                              | Successful                              |
| Global sound insulation                | ISO 717-1                             | 33,5 dBA                                |
| Impact noise insulation (steps)        | UNE EN ISO 10140-1:2016. Anexo H      | 17 dB                                   |
| Electrical resistance and resistivity  | UNE-EN 61340                          | 2 · 10 <sup>12</sup> Ω                  |
| Furniture sliding                      | UNE EN 424:2002                       | Correct (32 kg)                         |
| Effect of the chair with wheels        | UNE EN 425:2002                       | Correct (25000 cycles)                  |
| Static punching                        | EN ISO 24343-1:2012                   | Indentation <0.01 mm / No deterioration |
| Surface start                          | UNE EN 13329:2016. Anexo D            | > 2,1 N/mm²                             |

Table 3. Hygiene, maintenance and sustainability properties

| PROPERTY   | TEST METHOD                                   | RESULT       |
|--|---|--------------|
| Resistance to bacteria                             | ISO 846                                       | No growth    |
| Resistance to fungi                                | ISO 846 / ASTM G21                            | No growth    |
| Resistance to microbes in building materials       | UL 2824 (ASTM D6329)                          | No growth    |
| Wear and tear and cleanability                     | CSA B45.5-11   IAPMO Z124-2011                | Complies     |
| Stain resistance - washability                     | NEMA LD3                                      | Satisfactory |
| Chemical resistance                                | ISO 19712 (Method A)                          | Satisfactory |
| Stain resistance in bathroom products              | UNE 56867                                     | Satisfactory |
| Photocatalytic resistance to bacteria*             | ISO 27447                                     | Active       |
| Photocatalytic self-cleaning properties*           | ISO 10678                                     | Active       |
| Photocatalytic air purification*                   | ISO 22197                                     | Active       |
| Degradation of chemical substances*                | ISO 10678                                     | Active       |
| Migration  | Regulation 10/2011 of the European Commission | Compliant    |
| Toxicity of dust from cutting activities           | MTA/MA-014/A11                                | Non-toxic    |
|  | UNE-EN 12457-4                                |              |
|  | UNE-EN ISO 11348-3                            |              |
| SiO <sub>2</sub> content                           | Instituto Nacional Silicosis (INS)            | Not found    |
| Ecotoxicity (terrestrial and aquatic environments) | OECD 202:2004                                 | Non-toxic    |
|  | OECD 203:1992                                 |              |
|  | OECD 201:2006                                 |              |
|  | OECD 207:1984                                 |              |
|  | OECD 208:2006                                 |              |

\* Only in Snow White 1100 EAST.

Table 4. Fire performance properties

| PROPERTY   | TEST METHOD         | RESULT                     |
|--|---------------------|----------------------------|
| Specific heat  | UNE-EN 23721        | 1,361 J/g· K               |
| Thermal resistance   | UNE-EN 12667        | 0,064 m <sup>2</sup> · K/W |
| Marine   | IMO Certificate     | Mod.B & Mod. D             |
| Marine. Toxicity of smoke  | IMO FPTC Part 2     | Complies                   |
| Ventilated façades   | UNE-EN 13501-1      | B-s1,d0                    |
| Fire performance   | UNE-EN 13501-1      | B-s1,d0                    |
| Flammability   | UL94HB              | Complies                   |
|  | UL94V               | V0                         |
| Surface burning  | ASTM E84 (NFPA 255) | Flame spread 0             |
|  |                     | Generated smoke 5          |
| Burnt floor surface  | CAN/ULC-S102.2      | Flame spread 0             |
|  |                     | Generated smoke 0          |
| Fire rating  | DIN 4102-1          | B1 No restrictions         |
| Potential heat   | ISO 1716 / NFPA 259 | 9,3 MJ/kg                  |
| Ignition   | NFPA 268            | Complies                   |
| Flammability. Surface combustion characteristics of building materials | NFPA 101            | Class A                    |
| Flashpoint   | ASTM D1929          | 440 °C                     |
| Auto-ignition temperature  | ASTM D1929          | 490°C                      |
| Single combustion test for building materials and products             | GB/T20284-2006      | Complies                   |
| GOST standard  | GOST                | Complies                   |

\* Results for solid color sheets (example: Snow White 1100) and 12 mm thick. The values are informative, based on tests carried out in external laboratories and periodically checked in the internal laboratories of KRION SOLID SURFACE, S.A.U. Their purpose is not to serve as a basis for engineering calculations. For accurate calculations, contact KRION SOLID SURFACE, S.A.U.

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