

KRION™ LUX
Ref. FDT0001en

Version 9.1 - Revision 11/11/2016

Cancels and replaces: Version 9

KRION[®] LUX

01 PRODUCT NAME/MANUFACTURER

Product name: KRION™ LUX
 Company: SYSTEMPOOL S.A.
 Ctra. Villarreal - Puebla de Arenoso (CV-20), Km. 1 - P.O.Box 372
 12540 Villarreal (Castellón) SPAIN
 www.krion.com - krion@krion.com / www.system-pool.com - system-pool@system-pool.com
 Tel. / Fax: (+34) 964 50 64 64 / (+34) 964 50 64 81

02 PRODUCT DESCRIPTION

KRION™ LUX is a new generation solid surface developed by SYSTEMPOOL S.A., a company that forms a part of the PORCELANOSA Group.

KRION™ LUX has a warm and soft touch, which is solid, uniform throughout its entire thickness, and non-porous. It is available in sheets and moulded shapes, allowing different sections to be bonded with invisible seams.

KRION™ LUX is a hygienic, inert and non-toxic product that is virtually fireproof, easy to maintain and repair, which can be transformed into a limitless variety of shapes and is highly resistant to chemical agents, steam or outdoor conditions.

This exclusive combination of visual and technical features make KRION™ LUX the ideal solution for a wide range of applications such as furnishings, kitchens, bathrooms, boat fixtures, wall coverings or architectural uses.

03 COMPOSITION

KRION™ LUX is composed of 2/3 natural mineral (ATH – aluminium trihydrate) and 1/3 latest-generation acrylic resins developed by SYSTEMPOOL S.A.

KRION™ LUX is manufactured solely and exclusively by SYSTEMPOOL S.A.

The exclusive composition of KRION™ LUX means it takes full advantage of all the technical and visual features of the mineral, combining them with the technical features of the polymers to provide a range of exclusive characteristics: it is anti-bacterial without the need for any type of additive, tough, resistant, durable, easy to repair, only requires minimum maintenance and is easy to clean. For further information, read the safety data sheets for the material at www.krion.com.

04 SERIES PRODUCTS

KRION™ LUX Sheets

KRION™ LUX is available in different standard formats and thickness.

PURE LUX		
Formats mm (inches)	Thickness	
	6 mm (1/4")	12 mm (1/2")
3600x760 mm (142x30")	✓	✓
3600x1350 mm (142x53")	✗	✓

LIGHT LUX		
Formats mm (inches)	Thickness	
	6 mm (1/4")	12 mm (1/2")
2500x760 mm (98x30")	✓	✗
3600x760 mm (142x30")	✓	✓
3680x760 mm (145x30")	✗	✓

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04 SERIES PRODUCTS

SNOW LUX					
Formats mm (inches)	Thickness				
	3 mm (1/8")	6 mm (1/4")	9 mm (3/8")	12 mm (1/2")	19 mm (6/8")
2500x760 mm (98x30")	✓	✓	✗	✗	✗
2500x930 mm (98x36")	✓	✓	✗	✗	✗
3680x760 mm (145x30")	✗	✓	✓	✓	✓
3680x930 mm (145x36")	✗	✓	✗	✓	✗
3680x1350 mm (145x53")	✗	✗	✗	✓	✗

STARS LUX / COLORS LUX / COLORS + LUX		
Formats mm (inches)	Thickness	
	6 mm (1/4")	12 mm (1/2")
2500x760 mm (98x30")	✓	✗
3680x760 mm (145x30")	✗	✓

ROYAL LUX / ROYAL LUX+ / NATURE / LUXURY	
Formats mm (inches)	Thickness
	12 mm (1/2")
3680x760 mm (145x30")	✓

KRION™ LUX sheets can be made in special formats based on minimum order conditions.

KRION™ LUX colours

KRION™ LUX is available in a wide range of colours and different finishes. In the case of projects that require colours not included in the catalogue, these can be made according to the customer's specifications, based on minimum order conditions.

05 PROPERTIES AND CHARACTERISTICS

KRION™ LUX is a material with the ideal technical features for use in commercial or residential settings, both indoors and outdoors, as it is durable, versatile and highly resistant.

KRION™ LUX is a hygienic, inert and non-toxic product that is virtually fireproof, easy to maintain and repair, which can be transformed into a limitless variety of shapes and is highly resistant to chemical agents, steam or outdoor conditions.

KRION™ LUX is a solid, non-porous product that is uniform throughout its entire thickness, which can be bonded to create invisible seams.

06 PROCESSING / INSTALLATION

Detailed information on processing and installing KRION™ is available in the "KRION™ Fabricator's Manual".

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07 MAINTENANCE

How to prevent damage to KRION[™]

As a general rule, avoid any prolonged contact with chemical products such as strong acids, alkalis or organic solvents. Any spills should be removed as quickly as possible (see table on exposure to chemical products).

A special cleaning and maintenance manual is available for KRION[™] surfaces, with simple instructions on how to keep KRION[™] surfaces looking as good as the day they were installed.

KRION[™] LUX can be damaged by strong impacts, especially by sharp objects, and even by excessive heat.

Repairing KRION[™]

In most cases, damage caused to KRION[™] LUX can be repaired. Small cuts, scratches or stains can be removed using a scouring pad (green Scott-Brite[™]) or a sheet of 320-grain sandpaper.

08 TESTS

KRION [™] Lux White 12 mm (8/16")			
Property	Test Method	Test Result	Units
Density	ISO 1183 / ASTM D792	1.71 - 1.77	g/cm ³
Flexural modulus of elasticity	ISO 178 / ASTM D790	8500 - 11900	MPa
Flexural strength		60 - 78	MPa
Elongation	ISO 178 / ASTM D638	0.7 - 0.85	%
Tensile modulus	ISO 527 / ASTM D638	9380 - 11325	MPa
Tensile strength		40 - 60	MPa
Compressive strength	ISO 604	97 - 117	MPa
Impact resistance (ball drop)	ISO 19712-2 UNE EN 438-2 ISO 4586-2 NEMA LD 3	Satisfactory (No break)	324g ball / Height 1.9m (2m)
Abrasion resistance	UNE EN 438-2 ISO 4586-2	0.028	% mass / Δmass(%) every 25 rev.
Resistance to boiling water	UNE EN 438-2 ISO 4586-2	0.1 - 0.30	% weight
		0.1 - 0.30	% thickness
		Level 5: No change	Levels 1-5
Resistance to bacteria	ISO 846 / ASTM G22	No proliferation	
Resistance to fungi	ISO 846 / ASTM G21		
Anti-slip properties depending of grit finish from (40-600)	UNE ENV 12633	Rd = 40 Class 2 - Rd = 12 Class 0	SR (Roughness) Pendulum
	ASTM C1028	0.8 - 0.69	Dry Static Coefficient
		0.82 - 0.62	Wet Static Coefficient
	ANSI A.137.1:2012	0.7 - 0.35	Wet Dynamic Coefficient
Dimensional stability	ISO 4586-2 UNE EN 438-2	0.02 (90% HR & 23°C)	% change in length
		0.08 (23% HR & 23°C)	
Dimensional stability at high temperatures	UNE-EN 438-2	0.18 (70°C)	% change in length
		0.10 (95% HR & 40°C)	
Linear thermal expansion	ISO 11359-2 ASTM D696 UNE-EN 14581	3.5 x 10 ⁻⁵	λ (mm/m °C)
Coefficient of thermal expansion		0.112	3*λ (mm ³ /m ³ °C)
Resistance to artificial weathering. Xenon arc (3000h)	ISO 4586-2 UNE EN 438-2 ISO 4892-2	Level 5: No change	Grey scale. Levels 1-5
Resistance to ultra-violet light. UV-313 lamp (1500 hrs)	UNE EN 438-2 ISO 4892-3	Level 4,5: Slight change	Grey scale. Levels 1-5
Lightfastness (122 hrs)	ISO 19712-2 UNE 56868:2002	Level 5: No change	Grey scale. Levels 1-5

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Ref. FDT0001en

Version 9.1 - Revision 11/11/2016
Cancels and replaces: Version 9

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KRION™ Lux White 12 mm (8/16")			
Property	Test Method	Test Result	Units
Colour fastness	ISO-19712-2	Satisfactory	
Thermal resistance	UNE EN 12667	q = 104.8	W / m
		R = 0.05	m ² . K / W
		λ = 0.396	W / m . K
Thermal shock resistance (90 - 20 °C / 194 - 68 °F)	ISO-19712-2	Satisfactory	250 Cycles
Surface resistance to damp heat	ISO 19712-2 ISO 4586-2	Satisfactory Level 5: No change	Levels 1-5
Surface resistance to dry heat	ISO 19712-2 UNE-EN 438-2 ISO 4586-2 UNE 56867 UNE 56842	Satisfactory Level 4: Slight change in gloss degree only visible from certain angles.	Levels 1-5
Boiling water resistance	NEMA LD3	Without visible changes	
High temperature resistance		Without changes	
Surface defects	ISO-19712-2	Satisfactory	No defects
Barcol hardness	ISO-19712-2 ASTM D 2583	60 - 65	Units
Rockwell hardness	ISO-19712-2 ASTM D785 ISO-2039-2	> 85	Units
Falling ball test	ISO-19712-2 ISO-2039-1	240 - 280	N/mm ²
Resistance to cigarette burns	ISO 19712-2 UNE-EN 438-2	Satisfactory. Level 4: Slight change in gloss degree only visible from certain angles.	Levels 1-5
Load test	ISO-19712-2	Satisfactory (No cracks or fissures were observed after the test)	0.12 mm (residual deflection)
Chemical resistance (Method A)		Satisfactory 5 (In all cases, except acetone with level 4)	Levels 1-5
Chemical resistance (Method B)		27	Cleanliness rating from 0 to 75
Chemical resistance	UNE 56867	Satisfactory	
Fire rating	UNE-EN 13501-1	B s1 d0 (using standard material)	Euroclass
	ASTM E84	Class A	"IBC class"
	DIN 4102-1	B1 (with no restrictions)	
	UL94HB	Satisfactory	
	NFPA 259	Satisfactory	
Scratch resistance	UNE-EN 438-2	4	Levels 1-5
	Eq. Mohs	3	
Cracking resistance	UNE-EN 438-2	5	Levels 1-5
Surface permeability	NF T 30-801	8	g/m ² day
Resistance to water vapor	UNE 56867 UNE 56842	Satisfactory (6.04 KJ/g)	
Specific heat	UNE 23721	1.361	J/g K
Water absorption	ASTM D570	0.03	%
Deflection temperature (load 1.82 N/mm ²)	ASTM D648	>95	°C
Wear & Cleanability	CSA B45.5-11 IAMPO Z124-2011	Complies	
Cutting powder toxicity	UNE-EN ISO 11348-3 MTA/MA - 014 / A11 UNE EN 12457-4	Without effects	

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Ref. FDT0001en

Version 9.1 - Revision 11/11/2016

Cancels and replaces: Version 9

09 CALCULATION OF THE EFFECTS OF DIFFERENT SUBSTANCES ON KRION[™] LUX

- One drop of the product is placed on the surface and left for 16 hours.
- White (MATT 240): Removal using water or green Scott-Brite[™].
 - 1 - Product is removed only using water and does not leave a mark.
 - 2 - A green Scott-Brite[™] is required to remove the mark.
 - 3 - Mark is not removed.
- Colour (GLOSS 1000): Removal with water or sponge/cloth and alcohol.
 - 1 - Product is removed only using water and does not leave a mark.
 - 2 - Product requires alcohol, non-abrasive liquid detergent and a sponge to remove the mark.
 - 3 - Mark is not removed.

Substance	KRION [™] LUX		Substance	KRION [™] LUX	
	White	Colour		White	Colour
Olive oil	1	1	Mineral oil	1	2
Sugar	1	1	Coffee	1	1
Food colouring	1	1	Ketchup	1	1
Mustard	1	1	Tea	2	3
Vinegar	1	1	Wine	2	2
Lemon juice / fruit and vegetable juice	2	3	Black shoe polish	2	2
Bang [™] Cleaner	2	3	Methylene chloride derivates (paint strippers)	3	3
Drain cleaner	3	3	Chlorinated detergent (domestic)	1	3
Bleach (1%) and soap solution	1	1	Permanent marker pen	2	3
Hydrochloric acid	2	3	Shower Power	1	1
Viacal [™]	3	3	Vitroclean [™]	1	3
Lipstick	2	1	Nail polish	2	2
Domestic soaps	1	1	Nail polish remover	2	3
Hair dyes and bleaches	3	3	Toothpaste	2	1
Cigarette (nicotine)	2	2	Pencil lead	2	1
Pen ink	2	3	Urine	1	1
Ethyl acetate	2	3	Acetone	3	3
10% Acetic acid	1	3	98% Acetic acid	2	3
10% Citric acid	1	1	20% Hydrochloric acid	3	3
30% Hydrochloric acid	3	3	5% Hydrofluoric acid	3	3
6% Nitric acid	3	3	25% Nitric acid	3	3
30% Nitric acid	3	3	70% Nitric acid	3	3
Perchloric acid	3	3	Picric acid	1	3
25% Sulphuric acid	3	3	33% Sulphuric acid	3	3
60% Sulphuric acid	3	3	96% Sulphuric acid	3	3
Tannic acid	1	1	Uric acid	1	1
Amylic acid	1	1	Butyl alcohol	1	1
Ethyl alcohol (Ethanol)	1	1	Isopropyl alcohol	2	3
Ammonia (10%)	1	1	Bromothymol blue	2	1
Dimethyl blue	2	3	Benzyne	2	1
Sodium bisulphite	2	3	Chloroform	2	3
10% Iron chloride	2	3	10% Zinc chloride	1	1
Dimethylformamide	2	3	Carbon disulfide	1	1
Ethyl ether	1	1	Ethyl glycol	1	1
Formaldehyde	1	1	40% Formaldehyde	1	1
30% Sodium phosphate	1	3	n-hexane	1	1
5% Ammonia hydroxide	1	1	28% Ammonia hydroxide	1	1

KRION™ LUX
Ref. FDT0001en

Version 9.1 - Revision 11/11/2016

Cancels and replaces: Version 9

09 CALCULATION OF THE EFFECTS OF DIFFERENT SUBSTANCES ON KRION™ LUX

Substance	KRION™ LUX		Substance	KRION™ LUX	
	White	Colour		White	Colour
5% Sodium hydroxide	2	3	10% Sodium hydroxide	3	3
25% Sodium hydroxide	3	3	40% Sodium hydroxide	3	3
Sodium hydroxide in flakes	3	3	Methanol	2	1
Methyl ethyl ketone	2	3	Naphthalene	1	1
Methyl orange (1%)	2	3	Silver nitrate (10%)	2	3
Zinc oxide (paste)	1	1	Phosphorous pentoxide	2	3
Potassium permanganate (2%)	2	3	MEK Peroxide	2	3
Hydrogen peroxide	2	3	Methyl red (1%)	2	3
Saline solution (NaCl)	1	1	10% Sodium sulphate	1	1
Carbon tetrachloride	1	1	Tetrahydrofuran	2	3
Sodium thiosulfate	1	1	Toluene	1	3
Urea 6%	1	1	Crystal violet	2	3
Xylene	2	3	Iodine (1% alcohol)	1	1
Betadine™	1	3			

Notes:

- For products not included in the list, check if their composition includes similar substances to those detailed above.
- The published information refers to the indicated exposure conditions.

10 LEGAL NOTICE

The information provided in this technical data sheet corresponds to our current knowledge about KRION™. This information is only given to provide suggestions based on our experience. It is not our aim to replace any type of test that may be required. This information will be updated when further details are available. This document does not have any legal value.

11 OTHER INFORMATION

DISCLAIMER. The information in this Technical Data Sheet was obtained from sources that we consider to be reliable. Notwithstanding this, the information is supplied with no express or implicit guarantee of its exactitude. The conditions or methods of the product's handling, storage, use or disposal are beyond our control and probably also beyond our knowledge. For this and other reasons, we cannot be held liable and rule out responsibility for any loss, harm or expense caused by or relating in any way to the product's handling, storage, use and disposal. This Technical Data Sheet was expressly drafted and must only be used for this product. If the product is used as a component of another product, this information might not be applicable.

