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XYLO CLEAF

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**XYLO CLEAF**



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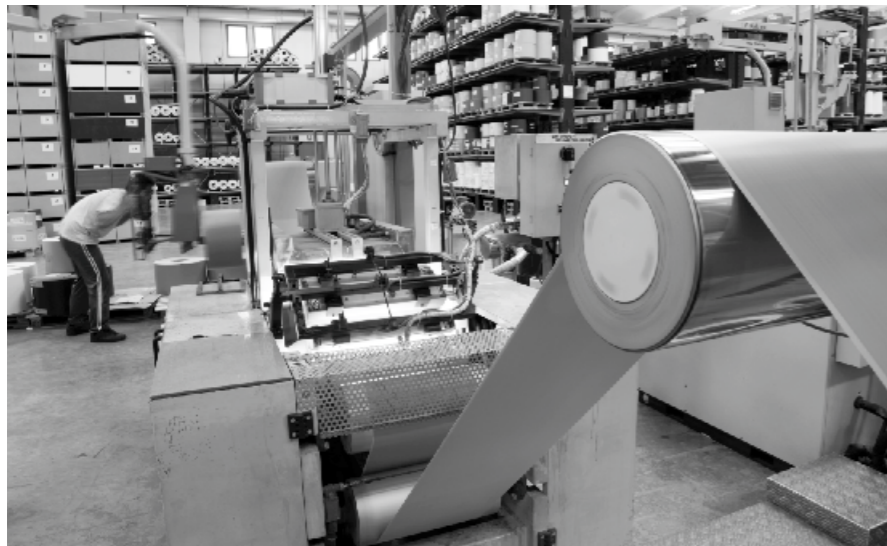
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research / innovation / technology / emotion

history



## History

XyloCleaf is a new brand that was established for the UK market as a collaboration between XyloFlooring and Cleaf of Italy, two influential companies with over 40 years of industrial experience and know-how.

Cleaf was founded in the 1970s, attempting to market custom-made wood-shaving panels. Today, almost 40 years later, CLEAF has managed to achieve total control of the entire manufacturing chain of bespoke panels for the furniture and interior design industry internationally.

Our company, XYLO, has been manufacturing and distributing market leading wood flooring since it was launched in the UK market in 1999. Our range of products consists of a large collection of top quality engineered wood flooring (click or T&G system) with a variety of colour and grade options, a multi-layer 18-21mm structural wood flooring, and a commercially rated vinyl and laminate flooring range, that both feature the world renowned Valinge 2G click/locking system.

Our customer base primarily consists of/Our customers are primarily retail outlets, flooring contractors and house builders/developers and our products are specified regularly in large and small developments throughout the UK. Our reputation is built on reliability and high quality service, as we hold large amounts of stock of each product line, available for immediate dispatch from our London based warehouse facility.

'Xylo' was appointed as the sole & exclusive distributor to Italy's leading decorative thermo structured surface (TSS) panel manufacturer, Cleaf, therefore launching the new brand 'XyloCleaf' in the UK market.

Its unique production plant and state-of-the-art manufacturing techniques - considered to be among the most innovative ones in its field of expertise – have offered an exclusive and versatile know-how to the company's production. This know-how is essential for its market, which ranges from melamine processes, sectioning & profiling to its latest technique of digital printing and thin melamine-faced panels for doors.

The identity and industrial culture of CLEAF material are deeply rooted in its location. The production premises of the company are located in Brianza, a world-leading district specialising in furniture. Its privileged position – located in the vicinity of other manufacturers and major brands – facilitates the cooperation between them and enables strong synergies, the exchange of skills and economies of scale. Quality, efficiency, research and sensitivity to markets and trends contribute to a continuing success and a constant evolution of CLEAF material, in terms of technology and design.

This virtuous circle has driven the constant evolution of CLEAF material, both in terms of technology and design, to success. Quality, efficiency, research & sensitivity to markets and trends: a production profile driving a constant acknowledgement and the progressive penetration of international markets.

In our showroom, customers may find a vast amount of products, available to the market in London, while the company can also merge different designs or colours in order to create the product of their choice.

XyloCleaf will offer the UK a fresh, sensational and inspiring collection of colours and textures that are both versatile and durable, and can be utilised for a wide range of applications, including all types of furnishings, panelling, doors and architraves.





emotion within reach

research and innovation





### Emotion within reach

As a result of its unique production processes, CLEAF has become one of the leading suppliers of high-quality furniture components internationally, by offering a complete range of marketing-orientated services for specialised and selected products. CLEAF is a system of non-material resources including corporate culture, brand assets, identification values and parameters and B2B relationships.

CLEAF provides a system of products and services based on research, advanced technology, innovation and design aiming to

### Research and innovation

For CLEAF, its in-depth research and development is a form of technical and conceptual experimentation, with surfaces primarily concerning not only the product itself, but also its vision and orientation.

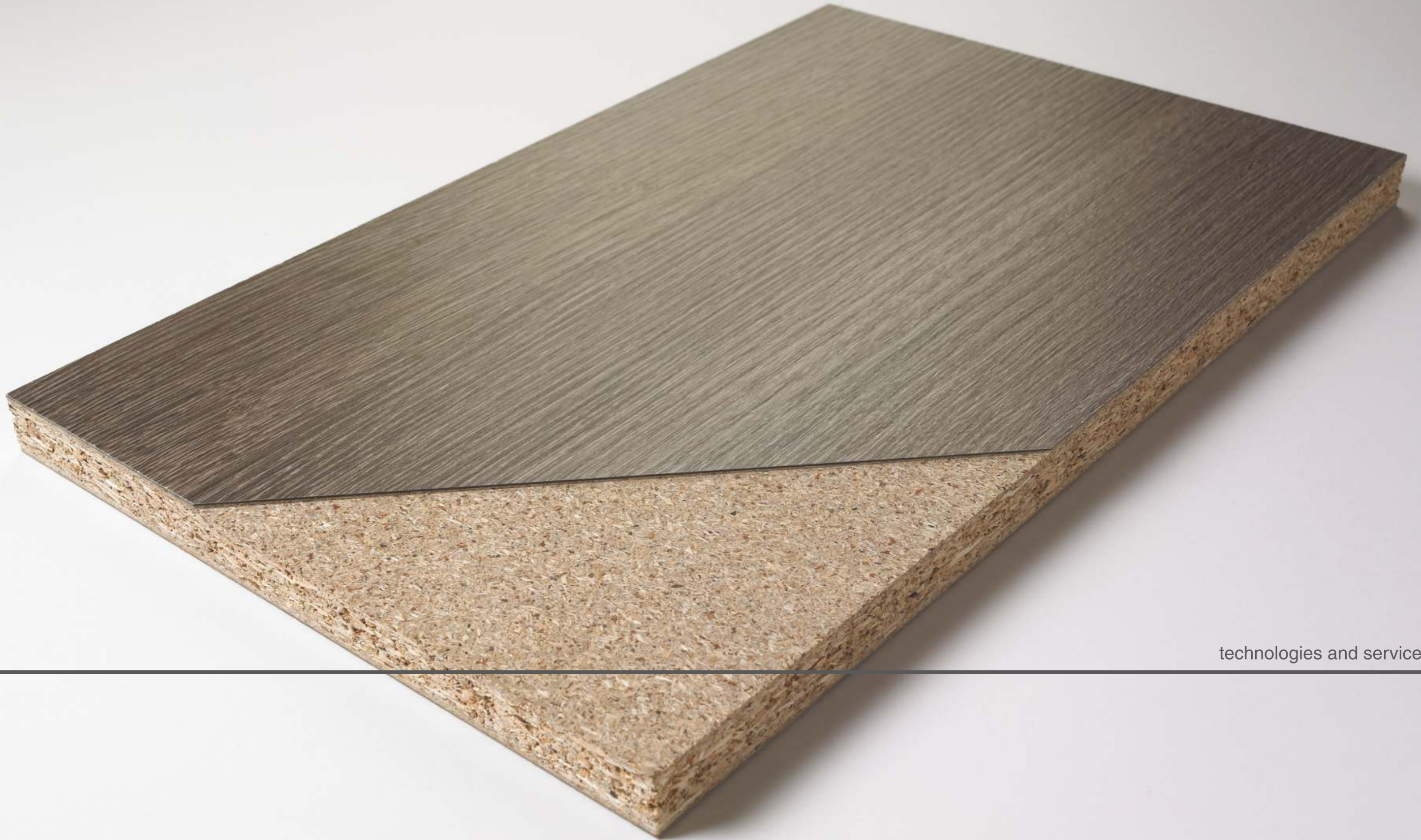
Stylistic and technological exploration is the result of research together with design, architecture and fashion, aiming to acquire their expressive codes and transcribe them onto the surface. Thus, a new alphabet is invented with a technical and functional performance, enhanced by a tactile and visual sensation.

CLEAF surfaces reveal an extraordinary potential since they work on an aesthetic, sensorial and technological inheritance. This amplifies their performance and strikes the sensorial dimension, by influencing whole generations of furnishing products.

CLEAF'S commitment to research has been awarded with numerous international prizes and has been acknowledged for its outstanding quality by the world of interior design:

- |  |                                    |
|--|------------------------------------|
| Matrix Finishing_INTERZUM AWARD        | Intelligent material & design 2007 |
| Surf Finishing_INTERZUM AWARD          | Intelligent material & design 2009 |
| Shanghai Finishing_INTERZUM AWARD      | Intelligent material & design 2009 |
| Nadir Finishing_INTERZUM AWARD         | Intelligent material & design 2011 |
| Yosemite Finishing_INTERZUM AWARD      | Intelligent material & design 2011 |
| Spigato Pattern_INTERZUM AWARD         | Intelligent material & design 2011 |
| Fusion Finishing_INTERZUM AWARD        | Intelligent material & design 2013 |
| Engineered Strand Board_INTERZUM AWARD | High Quality Product 2015          |





technologies and services

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### Technologies and services

40 years of history marked by on-going evolution have transformed CLEAF into a truly integrated system for experimentation and production of surfaces for interior design. CLEAF's high quality means use of cutting-edge technologies, adoption of the highest standards and use of the latest generation machinery, always in compliance with environmental protection regulations, values that offered the company its FSC certification.

The sustainable and environmentally responsible management involve the entire production process in optimising energy and raw material consumption to achieve high quality standards.

Technological advancement, efficiency, research and sensitivity to the market and its trends constitute the identikit of CLEAF'S production, enabling the company to grow in success and penetrate into international markets.

CLEAF revolutionizes the conventional approach to the market, focusing not on ordinary products, but on complete solutions in a true laboratory of tastes, trends and technologies. Every product is offered in various combinations and may be customised to provide complete solutions of great distinction.

CLEAF becomes a true partner meeting all kinds of requirements for custom-made products. It combines the unique "made-to-order" that can only be found at a craftsman's workshop with the creation of limited editions and large supplies on an industrial scale.

The CLEAF team consists of committed individuals with a highly-specialised background in the evolution of materials, qualified in order to help customers choose among the vast range of solutions, providing, at the same time, technical, commercial and stylistic/aesthetic consulting services.





creation of furniture





### The world of furniture

The CLEAF system offers a collection of classic, modern, avant-garde and customised decorations to the furniture industry. The company's mission is to constantly search for quality and exclusiveness in furniture, through original and harmonious combinations of tactile and chromatic effects and patterns. For this reason, CLEAF represents the starting point for anyone who is looking for new competitive solutions and for all those who wish to go a step further.







chair



table







bench



wash basin counter







kitchen counter





bookcase







wardrobe





dressing unit





application in restaurants







shop fitting



















office partition with door







boxes





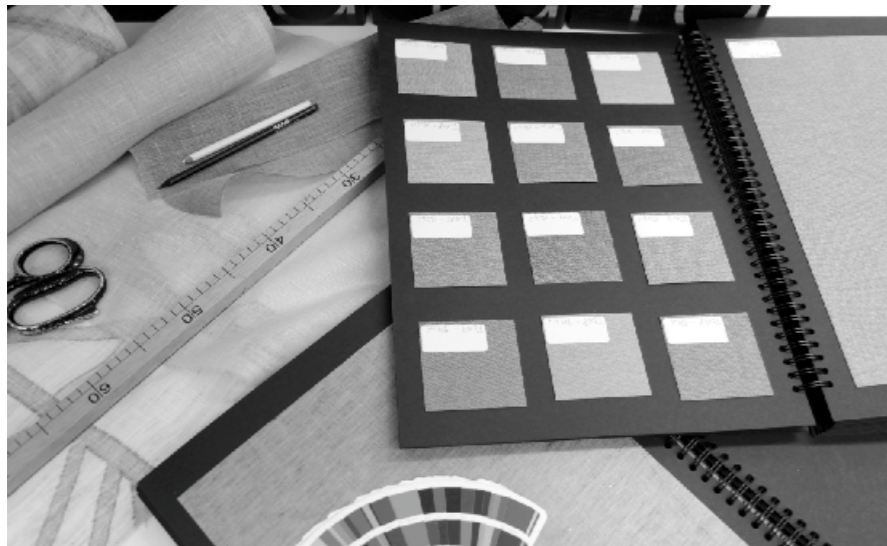




### Design studios and contract

CLEAF is a driving force in the furniture industry. A great number of professionals collaborate with CLEAF and turn to its management to discuss their ideas, examine their intuitions and screen/implement projects together.

The contract business is a parallel sector of the furniture industry of growing importance in large-size supplies. CLEAF offers Architects, Designers and Contract Business Managers its Engineering Department, Sample Showroom, Catalogue of Materials, IT Systems & Research Centre for the prototyping of new materials, Production Cycles and Cost Management.









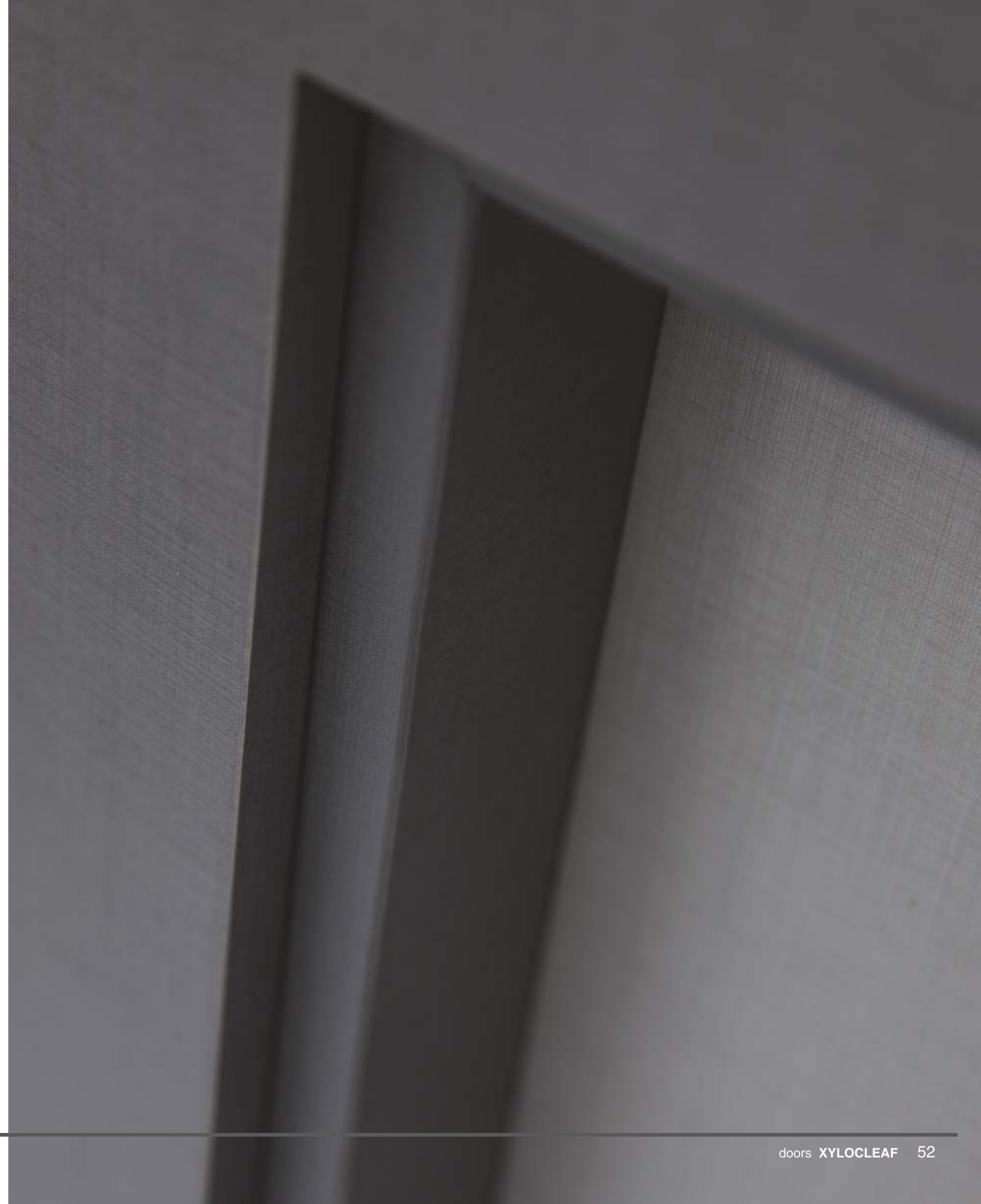


### The world of doors

Doors increasingly play a strong visual and practical role in interior decoration; they also act as partitioning between designated areas.

CLEAF possesses the sector of know-how that is required in the furniture industry (materials, patterns, colour combinations, finishes), as well as special technological solutions to supply a door system, complete in all elements and functional and stylistic details.

The encounter with the world of doors triggered an extraordinary synergy, in which CLEAF contributed new forms and expressions to the aesthetic value of the door, increasingly orientated towards design in both stylistic and functional terms.





## HPL laminate faced door leaf

**XyloDoor FD30**  
**XyloDoor FD60**

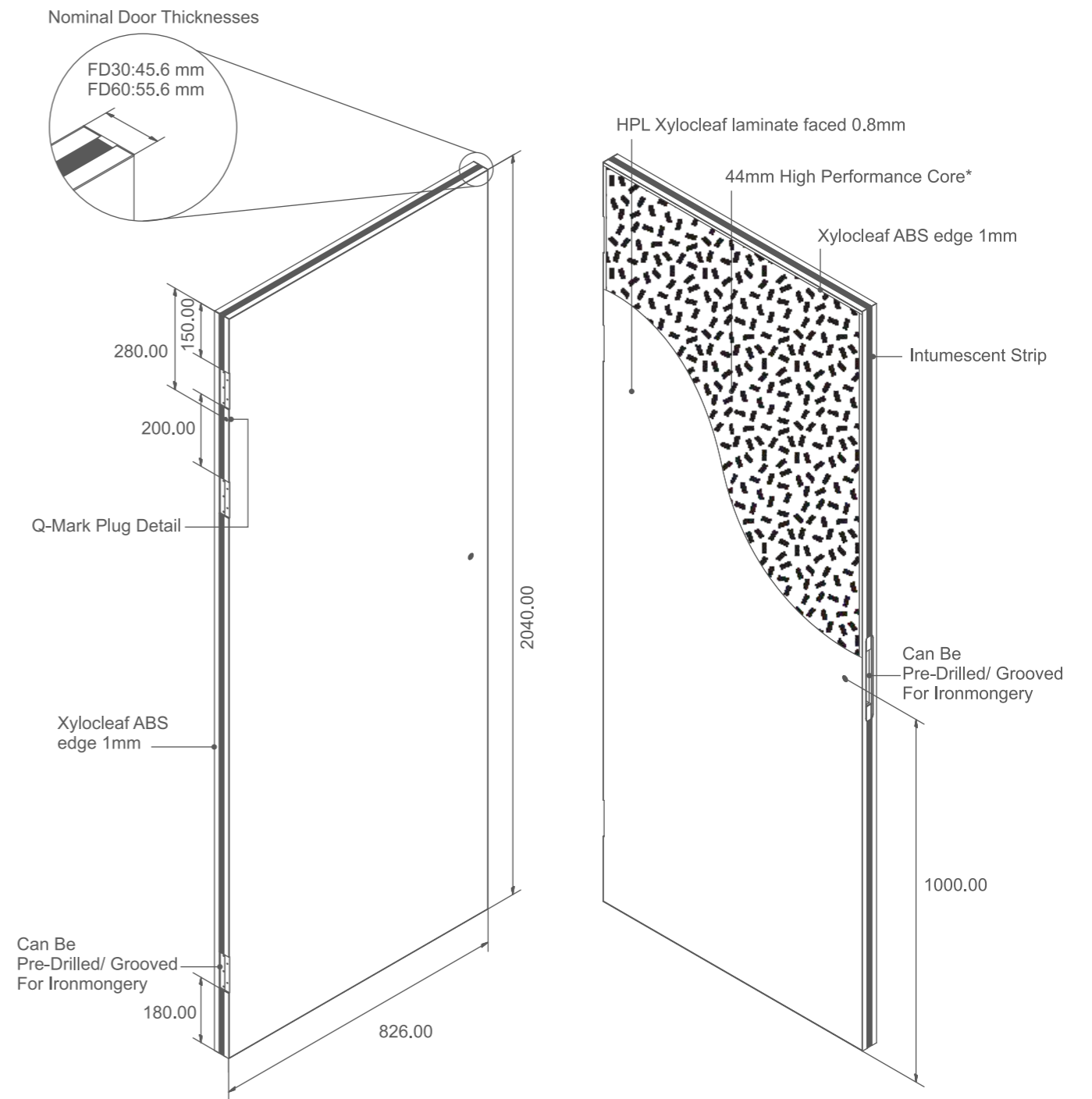
### door leaf

The door leaf with optional Q-Mark third party fire accreditation where required, developed by XyloCleaf is composed of four main elements:

- 0.8mm XyloCleaf HPL face
- 44mm Strebord GDC Fire Rated Core
- Hardwood Lipping where required
- Finishing with co-ordinated 1.0mm XyloCleaf ABS edge

The selection of decorative surfaces available in HPL laminate for the XyloCleaf door, is expanding month by month in the UK.

Q-Mark fire door certification ensures registered companies adhere to strict guidelines for Fire Door manufacture. Please note it is the responsibility of the installation company to ensure that best practice is followed for fire door assembly compliance.



\*Cores can be specified for specific applications



Certified fire door core material



Hardwood lipping to maintain fire integrity



Seamless color matched finishes



Typical intumescent detail in door leaf (fire or smoke control)



Typical Q-Mark 3rd party fire door identification



1.00mm ABS XYLODOOR edgebanding





**Option 1 - Yellow outer / Red inner**  
Grooved.  
Intumescent in door (supplied by others).  
No glazing.

**Option 2 - Yellow outer / Green inner**  
Intumescent in door fitted by manufacturer.  
No glazing.



**Option 3 - Yellow outer / Orange inner**  
Approved Door.  
Glazing by manufacturer.

**Option 4 - Yellow outer / Red inner**  
**Yellow outer / Orange inner**  
Grooved.  
Intumescent in door (supplied by others).  
Glazing by manufacturer.



**Option 5 - Yellow outer / Green inner**  
**Yellow outer / Orange inner**  
Intumescent in door fitted by manufacturer.  
Glazing by manufacturer.

Additional silver inner plug for Q-Mark door frames  
(Where Applicable)







**Option 1 - Blue outer / Red inner**  
Grooved.  
Intumescent in door (supplied by others).  
No glazing.

**Option 2 - Blue outer / Green inner**  
Intumescent in door fitted by manufacturer.  
No glazing.



**Option 3 - Blue outer / Orange inner**  
Approved Door.  
Glazing by manufacturer.

**Option 4 - Blue outer / Red inner**  
**Blue outer / Orange inner**  
Grooved.  
Intumescent in door (supplied by others).  
Glazing by manufacturer.

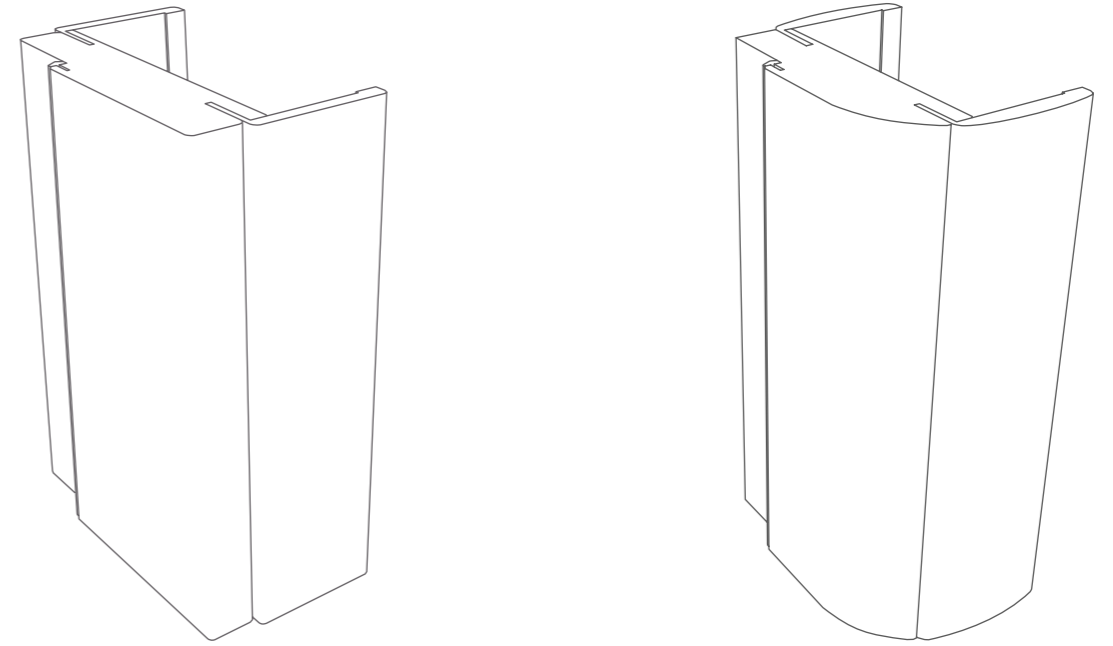
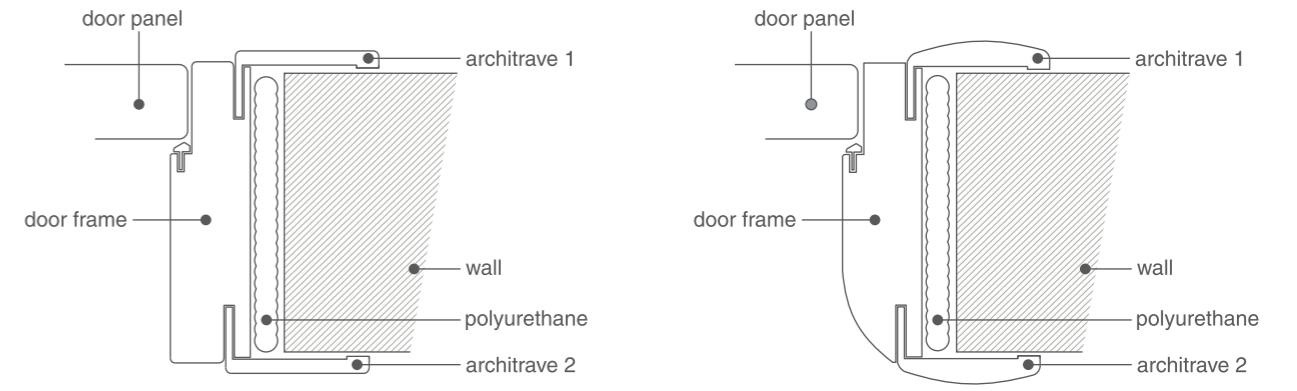
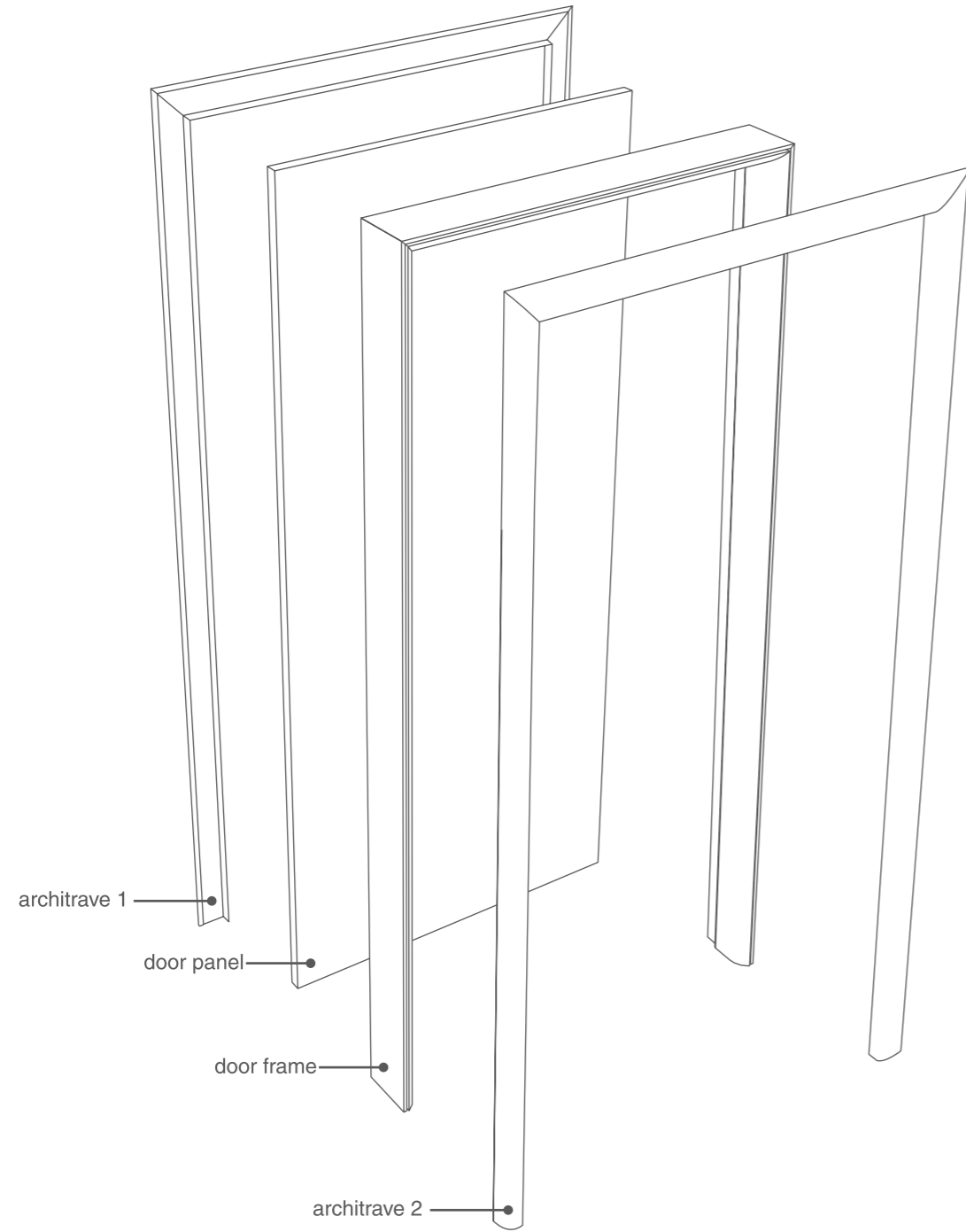


**Option 5 - Blue outer / Green inner**  
**Blue outer / Red inner**  
Intumescent in door fitted by manufacturer.  
Glazing by manufacturer.

Additional silver inner plug for Q-Mark door frames  
(Where Applicable)





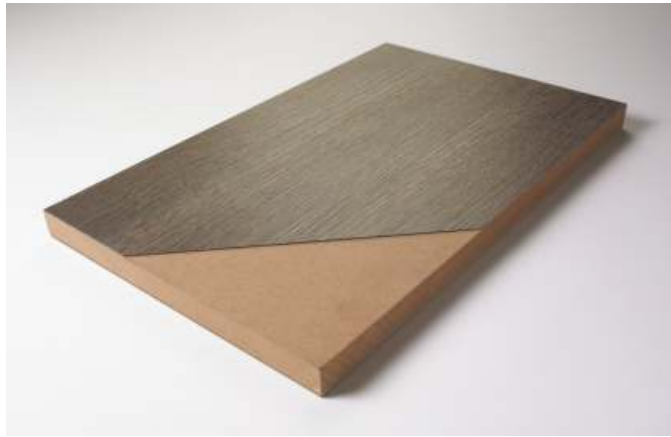




CLEAF surfaces become a system

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#### **CLEAF surfaces become a system**

CLEAF products and services, based on research, innovation and advanced technologies, become a landmark for the production of distinctive surfaces to meet the most sophisticated design and stylistic requirements. The high quality characterising all aspects of the company's productive process is the starting point for all working processes and the finish line for all CLEAF products:

**Faced panels:** highly specialised in faced surfaces with distinctive solutions offering a wide variety of finishes and patterns with strong sensorial and tactile properties. Available in a vast and continually evolving range of colours. The technological evolution in our field of expertise enables us to achieve amazing results in terms of performance, resistance, durability, workability and stylistic/creative characteristics.

**Laminate:** With the production of laminates, CLEAF offers the furniture industry increasingly high performance and complete alternatives that complement its range of products, guaranteeing greater strength and versatility. The range of laminated surfaces reflects the company's in-depth stylistic research and variety of patterns and colours, which can co-exist with faced materials in interior design projects, meeting important technical requirements and needs.

**Edges:** CLEAF'S production includes ABS edges in different thicknesses and finishes, developed to complete the CLEAF decoration service. Although the company has been producing wooden edges since 1975, the production has now evolved and includes wooden edges in rolls 0.6 to 5 mm thick, both unfinished and painted, ideal for covering shapes with real wood. CLEAF comes up with solutions that stand out for their design and aesthetic qualities, in which panels and edge frames become additional elements, perfectly integrated into the design.

The company's production plants guarantee constant moisture levels, calibrated thicknesses, plasticity and elasticity, dimensional stability and absence of blur, plus precise adhesion to obtain perfect edges on straight and especially shaped or worked surfaces.

**Series of processes:** Alongside its production line, CLEAF offers a series of processes, services completing the development and use of surfaces. With edging and squaring, drilling, folding and post-forming services, CLEAF offers an integrated system of complete and distinctive solutions.





dry-wall partition



raised floor





wall, floor and ceiling made from the same material





shaker door system



### Shaker door system

The long established expertise and research of CLEAF has developed the shaker door system. This system enables us to create easy-to-assemble and versatile shaker doors.

Its functional character was developed based on various aspects of its construction: in the flexibility of choice for material and design, the integration of elements from different designs and their size.

The shaker style doors are ideal for all kinds of applications: from kitchens to closets and wardrobes, as well as for living and bedroom furniture. By adding a lateral frame, they can turn niches and angle spaces into useful closets and wardrobes. The choice of material and door design can be used for traditional, classic and contemporary interiors.

The wide range in finishes and colours enables the development of ultimate tailor-made solutions. Beams and boards are made in CLEAF TSS - Thermo Structured Surface: a unique material that resulted from CLEAF's research in both technology and design. The surfaces are unique in their technical characteristics, their performance as well as their design patterns and textures.

The infinite range of colour and design combinations using CLEAF surfaces, enables the development of furnishing products with a high visual and tactile impact.





Azimut S027



Azimut S028



Sherwood S070



Sherwood S071



Shamal B071



Shamal UA92



Shamal UA94



Shamal UA99



Azimut S027



Azimut S028



Sherwood S070



Sherwood S071



Shamal B071



Shamal UA92



Shamal UA94



Shamal UA99

classic

flat

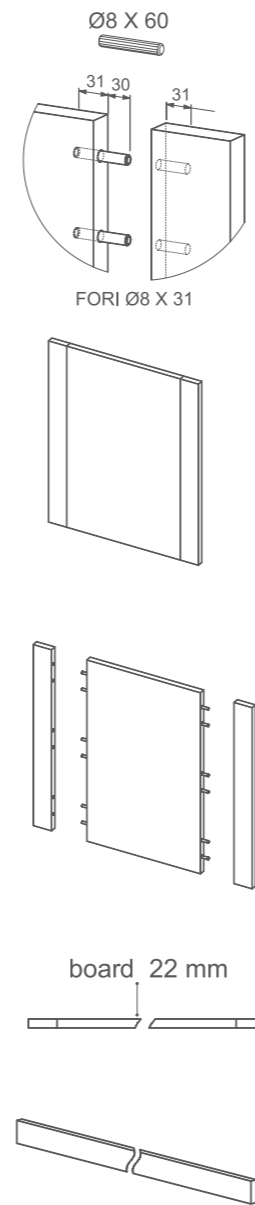
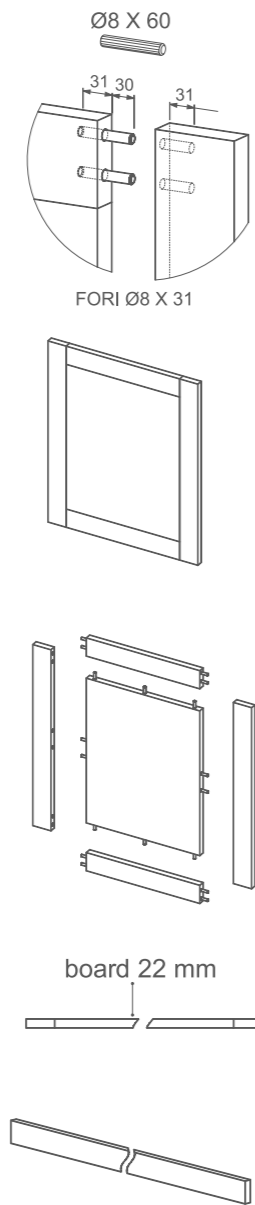
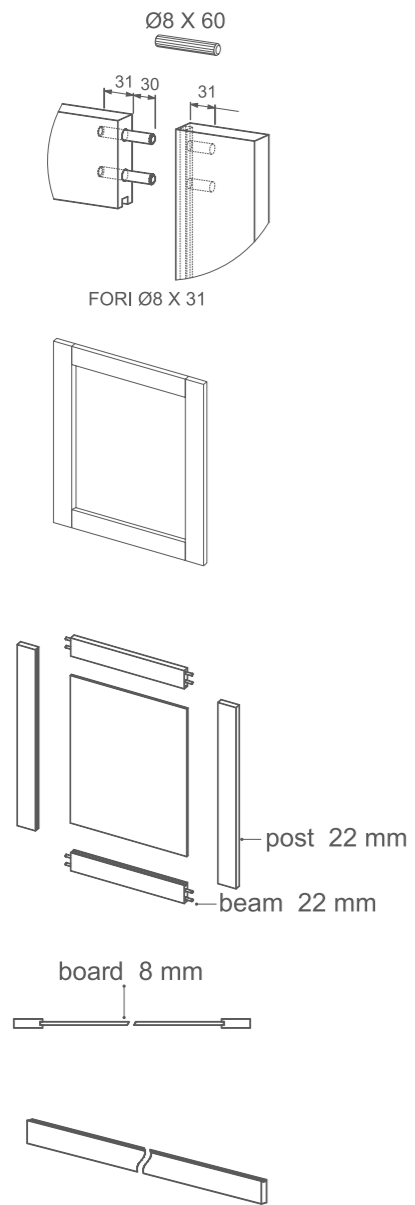
simple



Edges in 25 m packages, measuring 25 mm in height and 1 mm in depth, are available in the same finishing as the beams.



The package contains 10 no. of beams measuring 2800x80x22 mm





## how to assemble a shaker door

For kitchen cabinetry, first measure with precision the piece of furniture to which the door will be installed. To make the assembly procedure easier, please follow the illustrated guide with the step-by-step instructions.

### measuring the piece of furniture

FIG.1-2 measuring the width - L 600 mm



FIG.1



FIG.2

FIG.3-4 measuring the height - A 720 mm



FIG.3



FIG.4

### measuring the beam



To determine the exact beam size, calculate as follows:

From furniture width (FIG.1-2) subtract 4mm  
(-2 mm from the left, -2mm from the right)

From furniture height (FIG.3-4) subtract 4mm  
(-2 mm from the top, -2mm from the bottom)

For example:

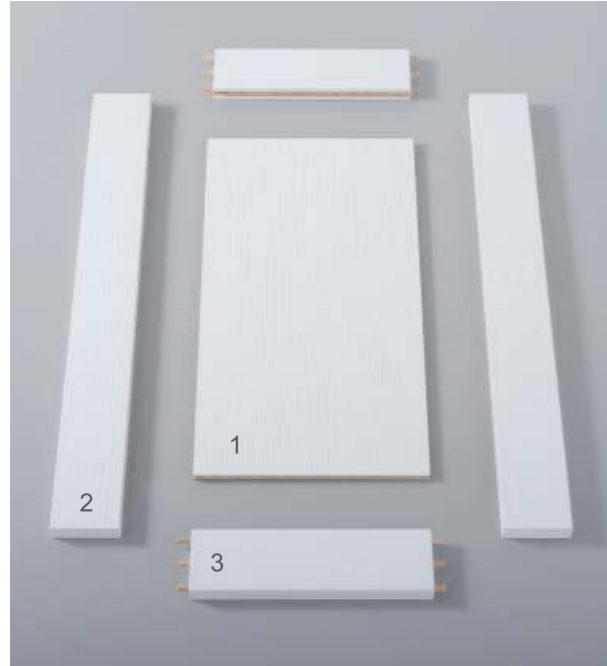
Furniture Width 600 mm -4 mm= 596 mm

Furniture Height 720 mm -4 mm= 716 mm

#### SIZE OF THE BEAM

Width 596 mm - Height 716 mm

## elements and depth of shaker door



no.1 central board  
no.2 lateral posts  
no.3 side beams with plugs



no.1 central board depth 8 mm  
no.2 lateral post depth 22 mm with holes for plugs  
no.3 side beams depth 22 mm with wooden plugs

## materials for assembly

glue, carpentry hammer, lateral posts and side beams, board, plugs





## assembly



1. Pour a few drops of glue in the holes of posts



2. Put a line of glue along the entire groove on lateral posts and side beams



3. With a lateral post join the first side beam



4. Set up the central board by inserting it in the corresponding groove



5. Insert the second side beam with a lateral post



6. Close the frame with the remaining post



7. Make sure all elements are firmly set and glued

finished shaker door







catalogue of CLEAF surfaces



#### XYLOCLEAF PANELS

The dimensions of the XyloCleaf panels in stock is as follows:

All surface collections 18mm x 2800 x 2070 mm

Kristall collection 19mm x 2790 x 1300 mm

Fusion collection 19mm x 2800 x 1350 mm

#### XYLOCLEAF ABS edge band

23mm wide x 100lm x 1mm

56mm wide x 100lm x 1mm

#### XYLOCLEAF HPL LAMINATES

All XyloCleaf products, excluding the Krystall and Fusion products, are also available in HPL Laminates with sheet size

0.8mm x 3050mm x 1300mm

#### Index of surfaces

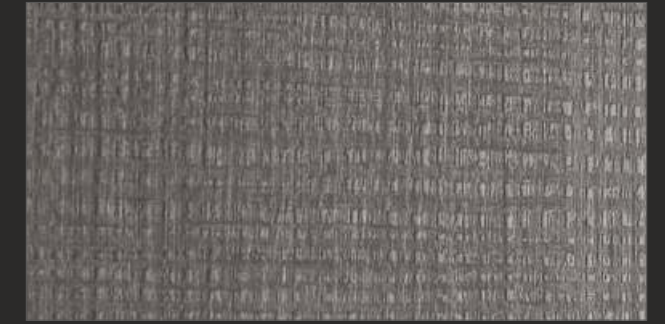
Alter / Azimut / Matrix / Nadir	91
Nadir	92
Penelope	93
Primo Fiore / Sherwood	94
Scultura / Spigato	95
Toucher / Tranche / Yosemite	96
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XyloCleaf constantly develops new designs, surfaces and products available on our website.

The colours and surfaces shown in the catalogue are merely an indication and may undergo variation compared to the real products. Texts and drawings are presented in this catalogue for publishing purposes. XyloCleaf reserves the right, at any time, to make changes in the products in this catalogue for technical and commercial purposes.

All the products shown in our catalogue are kept in stock in the UK.



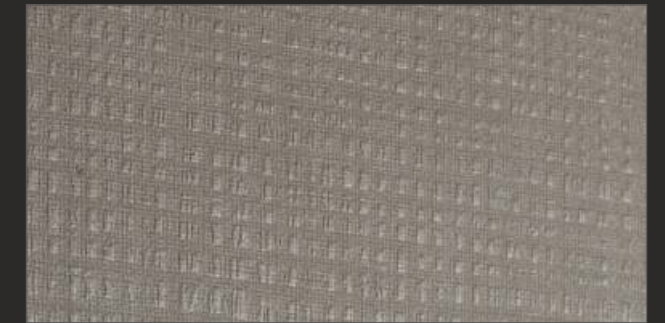


Bianco B073 Alter

French Grey S027 Azimut

Condotti FB06 Nadir

Old King LN01 Nadir

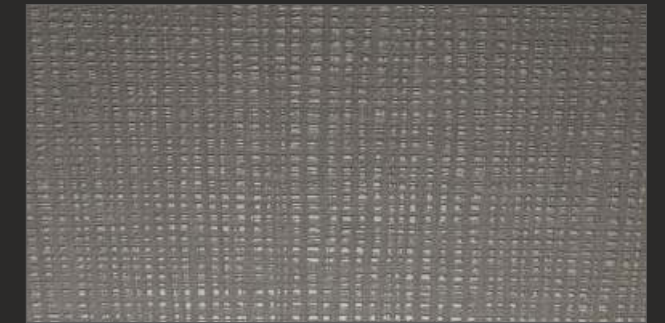
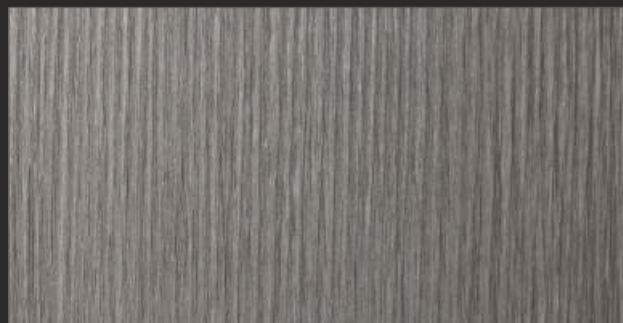


Vintage LM63 Matrix

Vintage LM62 Matrix

Grigio UA99 Nadir

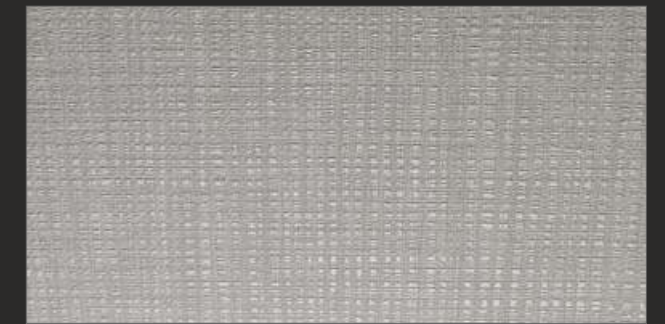
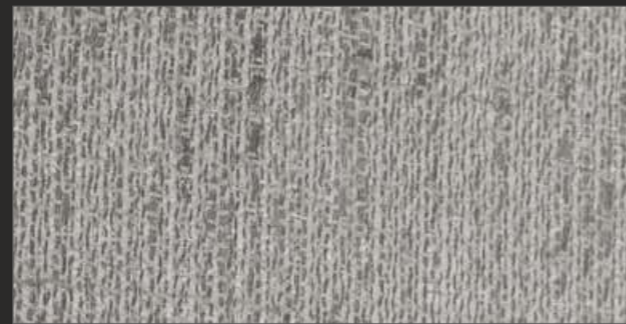
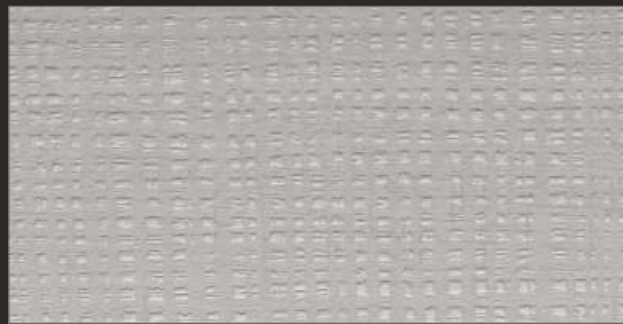
Confort FA42 Nadir



Rovere LK99 Matrix

Greige FA45 Nadir

Cardigan FB13 Nadir



Old King LN00 Nadir

Condotti FA97 Nadir

Overcoat FB17 Nadir

Scarf FB04 Nadir

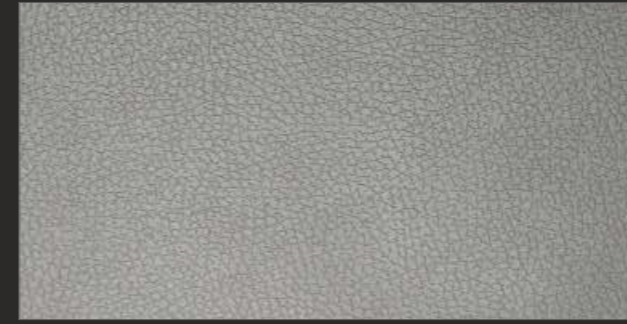




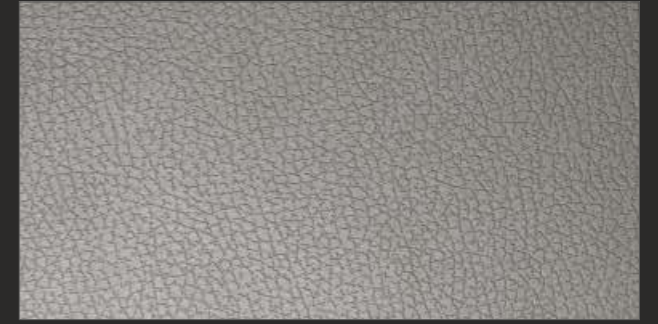
Kaki FA44 Penelope



Maya Bronze FA33 Penelope



Grigio UA49 Primo Fiore



Grigio UA99 Primo Fiore



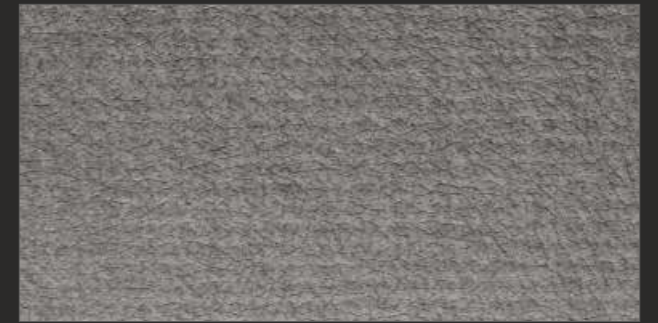
Cannella FA60 Penelope



Confort FA42 Penelope



Creme UB05 Primo Fiore



Tatami FB34 Primo Fiore



Urban Grey FA47 Penelope



Delave FA41 Penelope



Tatami FB32 Primo Fiore



Hyde Park S070 Sherwood



Greenwich Park S071 Sherwood



St Jame's Park S073 Sherwood





Old America LM09 Scultura



Santos Grey LM98 Scultura



Beige UA92 Toucher



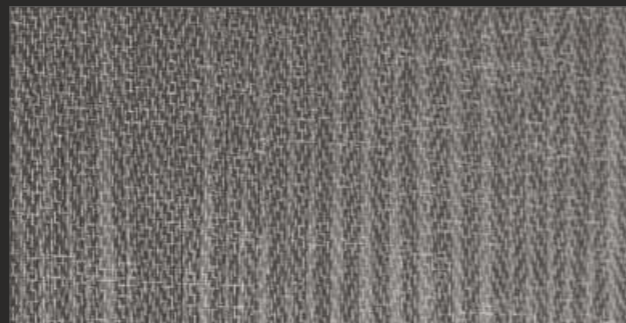
Bianco B013 Toucher



Dark Lady LM08 Tranche



Levante FA90 Spigato



Corteccia FA91 Spigato



Bianco B073 Yosemite



Champagne S010 Yosemite



Avegnue FA96 Spigato



Burned S012 Yosemite



Light Carbon S015 Yosemite



Petra FA72 Ares



Beton FB02 Ares



Maya Bronze FA33 Scaccomatto



Bianco B073 Damier



Iris FB45 Ares



Vulcano FB47 Ares



Bianco B073 Shanghai



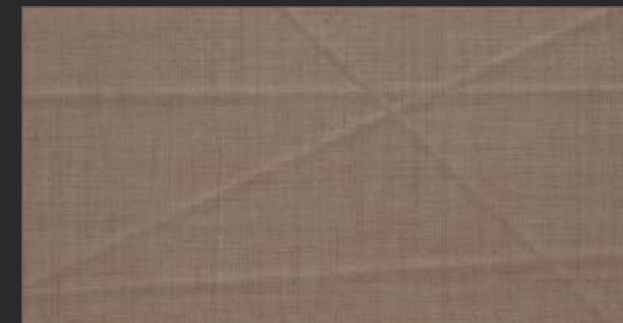
Bianco B073 Surf



Vulcano FB48 Ares



Vulcano FB49 Ares

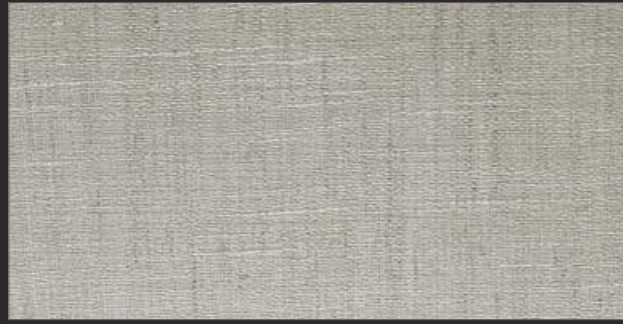


Cannella FA60 Shanghai

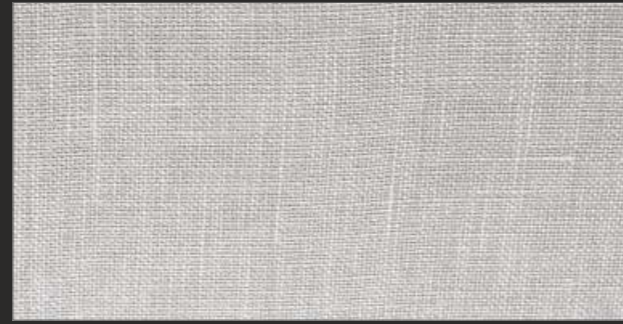


Grigio UA32 Maloja





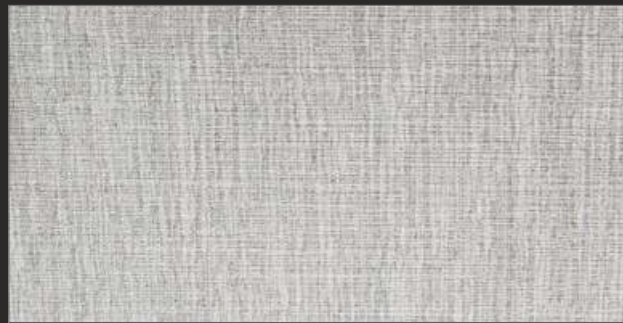
Mediterraneo T060 / UA80 Fusion



Mediterraneo T048/FA44 Fusion



Mediterraneo T057/FA44 Fusion



Let It Be T231/B011 Fusion



Total White KR01 Kristall



Visone KR02 Kristall



Caffè KR03 Kristall



Canapa KR10 Kristall

## surface thicknesses

PRODUCT	4MM	8MM	9MM	18MM	19MM	22MM	23MM	25MM	26MM	HPL
Bianco BO73 Alter	*	*		*		*		*	*	*
French Grey S027 Azimut		*		*		*		*	*	*
Vintage LM63 Matrix	*	*		*		*		*	*	*
Vintage LM62 Matrix	*	*		*		*		*	*	*
Rovere LK99 Matrix	*	*		*		*		*	*	*
Old King LN00 Nadir	*	*		*		*		*	*	*
Condotti FA97 Nadir	*	*		*		*		*	*	*
Condotti FB06 Nadir	*	*		*		*		*	*	*
Old King LN01 Nadir	*	*		*		*		*	*	*
Grigio UA99 Nadir	*	*		*		*		*	*	*
Confort FA42 Nadir	*	*		*		*		*	*	*
Greige FA45 Nadir	*	*		*		*		*	*	*
Cardigan FB13 Nadir	*	*		*		*		*	*	*
Overcoat FB17 Nadir	*	*		*		*		*	*	*
Scarf FB04 Nadir	*	*		*		*		*	*	*
Kaki FA44 Penelope	*	*		*		*		*	*	*
Maya Bronze FA33 Penelope	*	*		*		*		*	*	*
Cannella FA60 Penelope	*	*		*		*		*	*	*
Confort FA42 Penelope	*	*		*		*		*	*	*
Urban Grey FA47 Penelope	*	*		*		*		*	*	*
Delave FA41 Penelope	*	*		*		*		*	*	*
Grigio UA49 Primo Fiore	*	*		*		*		*	*	*
Grigio UA99 Primo Fiore	*	*		*		*		*	*	*
Creme UB05 Primo Fiore	*	*		*		*		*	*	*
Tatami FB34 Primo Fiore	*	*		*		*		*	*	*
Tatami FB32 Primo Fiore	*	*		*		*		*	*	*
Hyde Park S070 Sherwood		*		*		*		*	*	*
Greenwich Park S071 Sherwood		*		*		*		*	*	*
St Jame's Park S073 Sherwood		*		*		*		*	*	*
Old America LM09 Scultura		*		*		*		*	*	*
Santos Grey LM98 Scultura		*		*		*		*	*	*
Levante FA90 Spigato	*	*		*		*		*	*	*
Corteccia FA91 Spigato	*	*		*		*		*	*	*
Avegnue FA96 Spigato	*	*		*		*		*	*	*
Beige UA92 Toucher	*	*		*		*		*	*	*
Bianco BO13 Toucher	*	*		*		*		*	*	*

PRODUCT	4MM	8MM	9MM	18MM	19MM	22MM	23MM	25MM	26MM	HPL
Dark Lady LM08 Tranche	*	*		*		*		*	*	*
Bianco BO73 Yosemite		*		*		*		*	*	*
Champagne SO10 Yosemite		*		*		*		*	*	*
Burned SO12 Yosemite		*		*		*		*	*	*
Light Carbon SO15 Yosemite		*		*		*		*	*	*
Petra FA72 Ares		*		*		*		*	*	*
Beton FB02 Ares		*		*		*		*	*	*
Iris FB45 Ares		*		*		*		*	*	*
Vulcano FB49 Ares		*		*		*		*	*	*
Vulcano FB48 Ares		*		*		*		*	*	*
Vulcano FB47 Ares		*		*		*		*	*	*
Grigio UA32 Maloja	*	*		*		*		*	*	*
Maya Bronze FA33 Scacomatto		*		*		*		*	*	*
Bianco BO73 Damier			*		*		*		*	*
Bianco BO73 Shanghai			*		*		*		*	*
Bianco BO73 Surf			*		*		*		*	*
Cannella FA60 Shanghai			*		*		*		*	*
Mediterraneo T060 / UA80 Fusion				*						
Mediterraneo T048 / FA44 Fusion				*						
Mediterraneo T057 / FA44 Fusion				*						
Let It Be T231 / B011 Fusion				*						
Total White KR01 Kristall					*					
Visone KR02 Kristall					*					
Caffe KR03 Kristall					*					
Canapa KR10 Kristall					*					

### XYLOCLEAF PANELS

The dimensions of the XyloCleaf panels in stock is as follows:

All surface collections 18mm x 2800 x 2070 mm

Kristall collection 19mm x 2790 x 1300 mm

Fusion collection 19mm x 2800 x 1350 mm

### XYLOCLEAF ABS edge band

23mm wide x 100lm x 1mm

56mm wide x 100lm x 1mm

### XYLOCLEAF HPL LAMINATES

All XyloCleaf products, excluding the Krystall and Fusion products, are also available in HPL Laminates

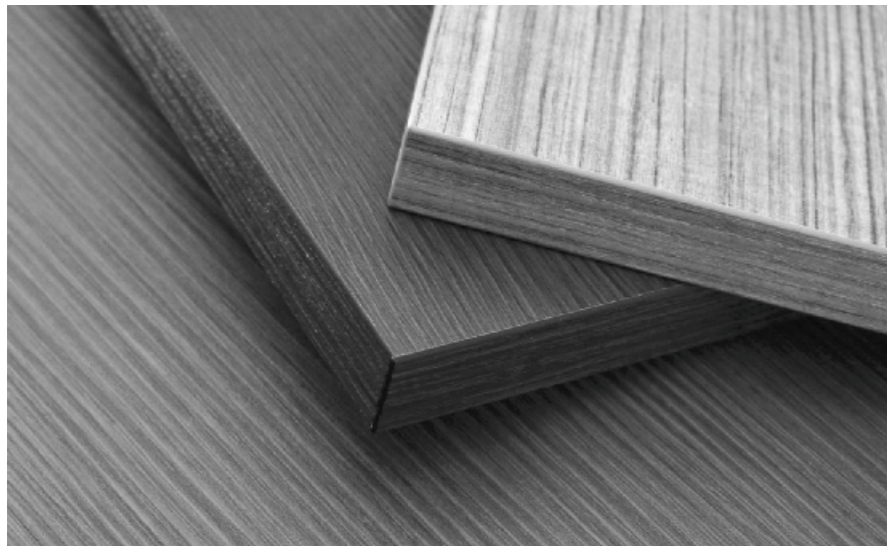
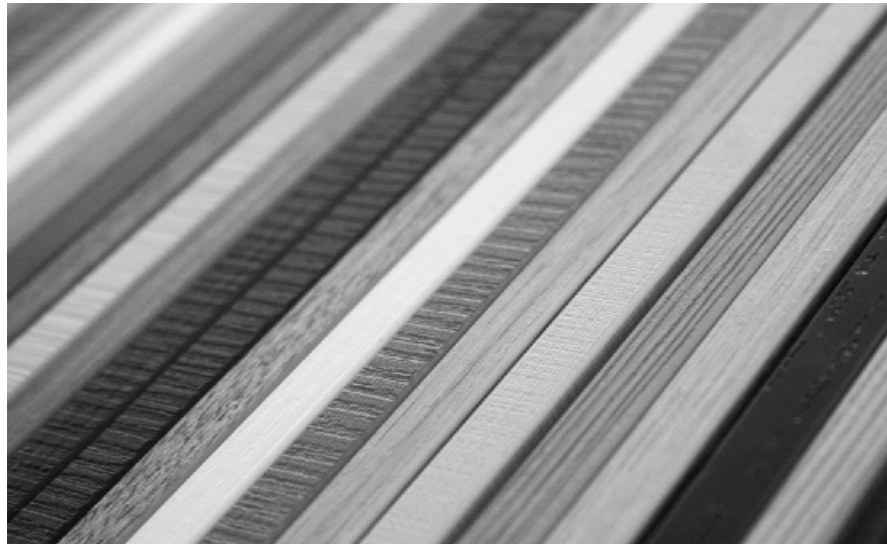
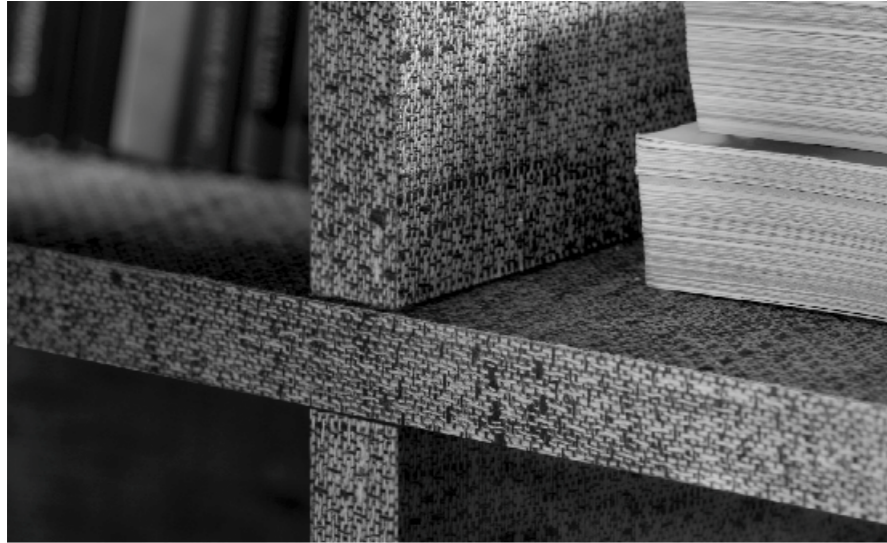
with sheet size 0.8mm x 3050mm x 1300mm





CLEAF edges





## ABS EDGE BAND

XyloCleaf creates ideal solutions both in technology, design and aesthetics, for the main element of the panels and the framing of the edges.

XyloCleaf consistently meets the dual challenge in both areas of research: edges versus panel requirements and panel versus edge finishing. As a result, uniformity is achieved in both product design and product manufacturing.



widths:  
from 14 mm to 320 mm

thicknesses:  
10/10  
available from stock

5/10 - 15/10 - 20/10  
non-stock, subject to a minimum order quantity

### ABS EDGE BAND: TECHNICAL DATA SHEET

Printing and embossing may be applied on extruded ABS laminate. A primer at the back side of the surface enables its adhesion by using any glue that is suitable for the wood industry.

#### technical characteristics

Width: **Rolls of 100LM** Thickness: **From 0.50mm to 2.5mm** Finish: Matt, semi matt or gloss  
Texture: Flat or textured

Gloss 60°	According to the structure +/-3 gloss
Length tolerance	+/- 3%
Width tolerance	-0/+0.5mm
Formaldehyde emission	Does not contain formaldehyde
Unicolour	DE ≤ 1,5
Printed colors	Matchable with reference sample (according to the first production)

#### GLUING

The back side of the edge band disposes of a specific primer that enables an impeccable gluing, which can be easily achieved by using the most common glues found in the wood industry (EVA hot melt, polyolefinic and polyurethanic glues). A preliminary test for compatibility is, however, recommended. For optimal adhesion, you may refer to the technical specifications of glue manufacturers. More specifically, please ensure that the temperature of both the panel and the edge is never lower than 18°C. Good storage conditions (cool and dry warehouse without exposure to direct sunlight and sudden temperature changes) will ensure the preservation of the primer's performance for a period of at least 12 months.

#### CLEANING & MAINTENANCE

The edge band surface is protected by a clear lacquer coating that ensures good resistance to scratches, stains and to cleaning and chemical agents. For cleaning, it is preferable to choose a detergent for domestic use. It is recommended that you avoid spraying products directly onto the surface, as this may leave stains and marks; instead, it is preferable to apply the detergent product on a soft damp cloth, clean the surface and then rinse it. Avoid using abrasive products, bleach or highly chlorinated products or acids.





technical specifications



## THERMAL STRUCTURE SURFACE(TSS)

TSS is the result of the work at Cleaf's surface research lab, a team focusing on the research and development of surfaces of top aesthetic and technological value.

The application of an irreversible thermal hardening treatment and the special preparation and processing allow remarkable tridimensional effects, bringing the surface to life and endowing it with extraordinary technical performance. The highest possible resilience to scratching and chemical substances as well as an amazing feel.

These surfaces are ideal for interior design, as they are made available both as panels and laminated surfaces and therefore can be used in furniture or wardrobes, kitchens, bathrooms, doors, wall coverings, cubicles and partitions.

Non recycled chipboard to be used internally (type P2 according to EN 312) faced on the top side with melamine decor patterns through a pressing process.

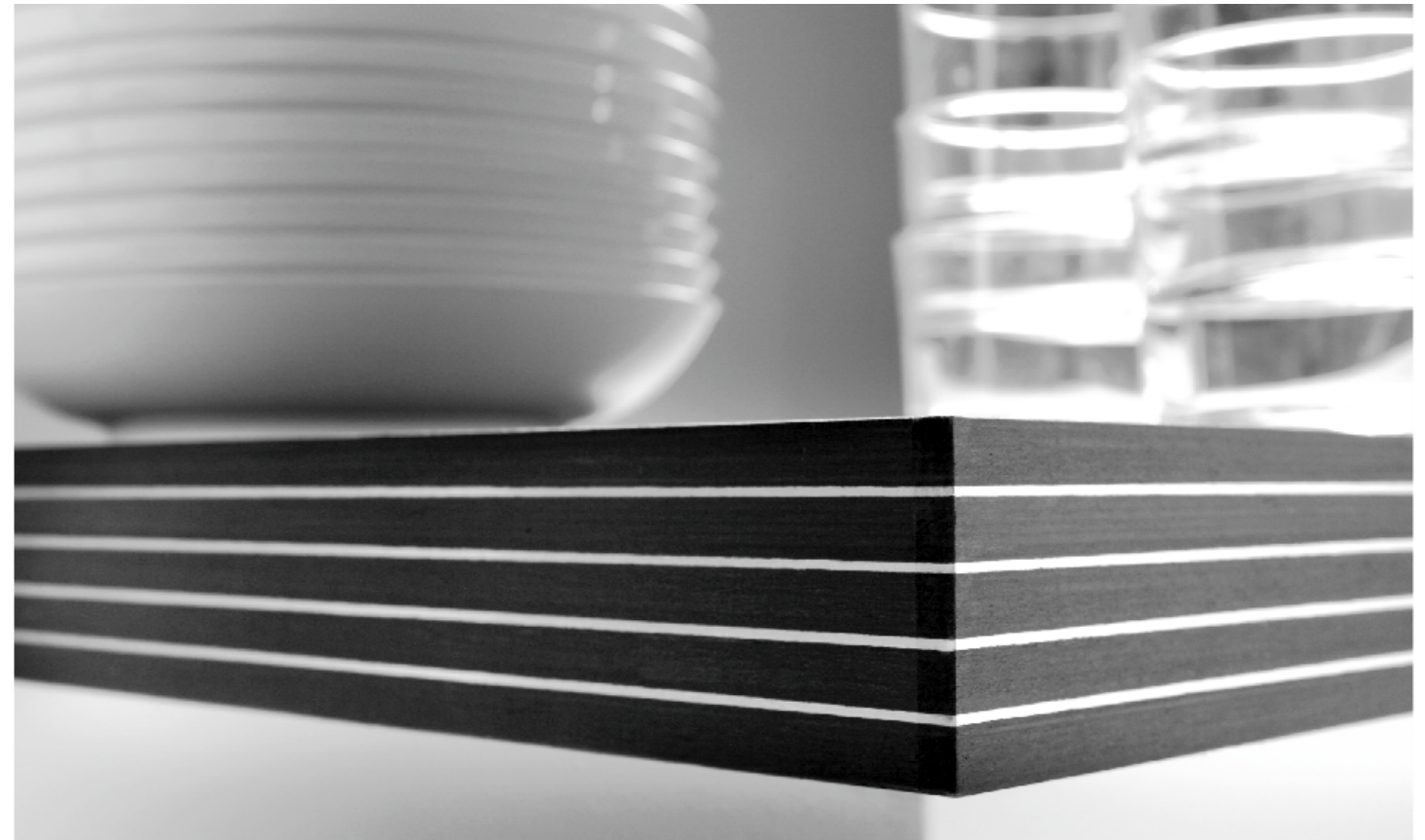
Available on request FSC-COC, water and fire resistant.

### surface characteristics

Resistance to abrasion	EN 14323	printed colours class 1, solid colours class 3A
Resistance to water steam	EN 14323	≥ level 4
Resistance to scratch	EN 14323	≥ 1.5 N
Resistance to stain	EN 14323	group 1 e 2, class ≥ 4
Resistance to light	EN 14323	≥ 6 blue wool scale
Resistance to cracks	EN 14323	class ≥ 3
Resistance to dry heat	EN 12722	class B
Tendency to keep dirt	UNI 9300	≥ level 4

\*legend

Level 5 - No visible change  
 Level 4 - Slight change, only visible at certain angles  
 Level 3 - Moderate change of gloss and/or colour  
 Level 2 - Marked change of gloss and/or colour  
 Level 1 - Surface distortion and/or blistering

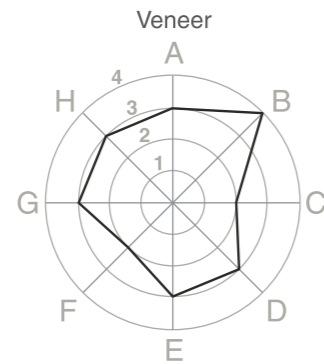
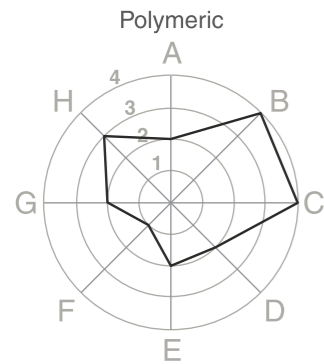
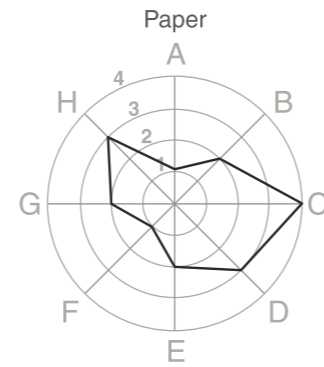
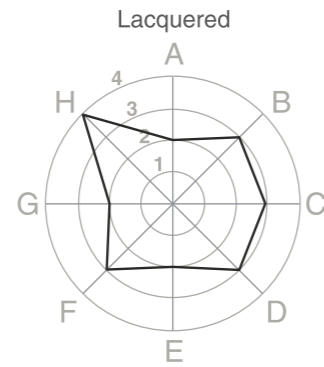
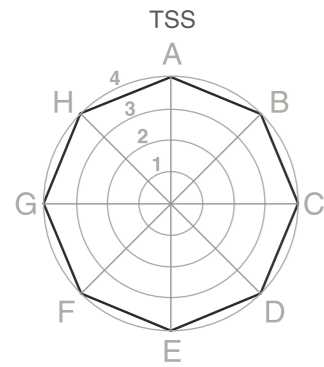




# THERMAL STRUCTURE SURFACE(TSS)

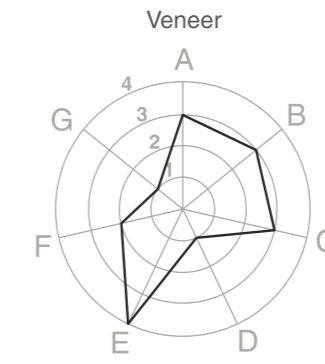
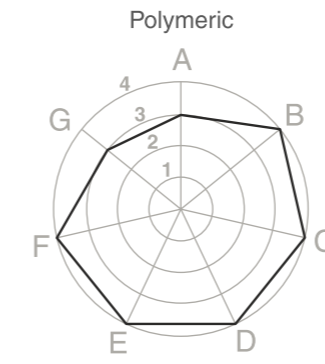
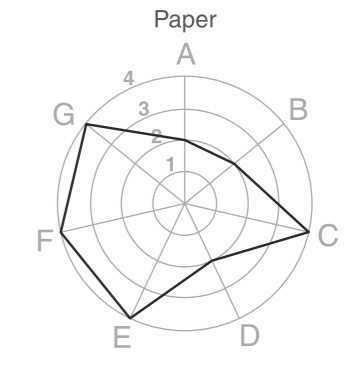
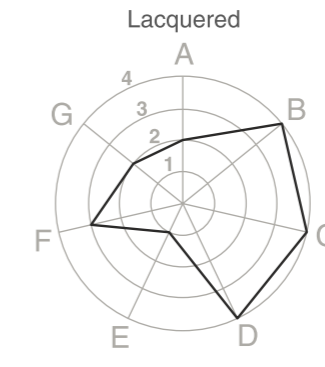
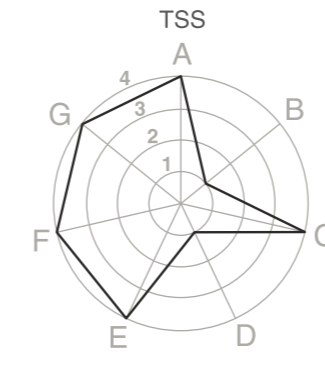
## technical characteristics

	TSS	Lacquered	Paper	Polymeric	Veneer
A. Resistance to scratch	4	2	1	2	3
B. Resistance to wear	4	3	2	4	4
C. Resistance to light	4	3	4	4	2
D. Resistance to heat	4	3	3	2	3
E. Resistance to stain	4	2	2	2	3
F. Resistance to solvents	4	3	1	1	2
G. Cleaning and maintenance	4	2	2	2	3
H. Gluing	4	4	3	3	3



## technical characteristics

	TSS	Lacquered	Paper	Polymeric	Veneer
A. Embossing deepness	4	2	2	3	3
B. High gloss quality	1	4	2	4	3
C. 2D profiles	4	4	4	4	3
D. 3D profiles	1	4	2	4	1
E. Print quality	4	1	4	4	4
F. Colour consistency	4	3	4	4	2
G. Price	4	2	4	3	1



## MELAMINE FACED TSS - PARTICLE BOARD PANELS

Particle board (chipboard) of non-recycled wood for interior use (type P2 in accordance with standard EN 312). On the top side, the product disposes of decorative melamine through a pressing process. Available on request: FSC-COC, water repellent and fire resistant.

### technical characteristics

Resistance to abrasion	EN 14323	Printed Class 1, Unicolour Class 3A
Resistance to water steam	EN 14323	≥ Level 4
Resistance to scratches	EN 14323	≥ 1,5N
Resistance to stains	EN 14323	Group 1 & 2, class ≥ 4
Resistance to light	EN 14323	≥ 6 blue wool scale
Resistance to cracks	EN 14323	Class ≥ 3
Resistance to dry heat	EN 12722	Class B
Tendency to retain dirt	UNI 9300	Level ≥ 4

### Particle board technical characteristics

<b>Composition</b>	Wood	trunks, stems, branches, logs, billets, root collars, fast-growing trees and shrubs, residues from sawmilling, veneer cutting, joinery and carpentry of broad-leaved and coniferous species, 78 - 88%
	Adhesive	Urea – formaldehyde glue, 7 - 9%
	Additives	Water, 5 - 13% - Ammonium sulfate, 0.2% - Paraffin Traces

<b>Density</b>	EN 323	500 - 700 Kg/m <sup>3</sup>
<b>Moisture content</b>	EN 322	5 - 13%
<b>Formaldehyde content</b>	EN 120	Class E1 <8mg/100g
	ASTM E1333-96	CARB (2) <0.09ppm

<b>Dimensional tolerances</b>	Thickness vs. nominal value	≤15mm +/-0.2mm	≥15mm +/-0.3mm
	Thickness within the panel	EN 14323	+/-0.3mm
	Length and width		+/-5mm

<b>Planarity (both sides melamine faced ≥ 15mm)</b>	EN 14323	≤ 2mm/m
<b>Surface defects</b>	EN 14323	Spots: ≤2 mm <sup>2</sup> /m <sup>2</sup> Length: ≤20 mm/m <sup>2</sup>

Requirements	Standard	>3mm ≤4mm	>4mm ≤6mm	>6mm ≤13mm	>13mm ≤20mm	>20mm ≤25mm	>25mm ≤32mm	>32mm ≤40mm	>40mm
Internal bonding N/mm <sup>2</sup>	EN 319	> 0,45	> 0,45	> 0,40	> 0,35	> 0,30	> 0,25	> 0,20	> 0,20
Bending strength N/mm <sup>2</sup>	EN 310	> 13	> 15	> 14	> 13	> 11,5	> 10	> 8,5	> 7
Elasticity modulus N/mm <sup>2</sup>	EN 310	> 1800	> 1950	> 1800	> 1600	> 1500	> 1350	> 1200	> 1050
Surface delamin. N/mm <sup>2</sup>	EN 311	> 0,8	> 0,8	> 0,8	> 0,8	> 0,8	> 0,8	> 0,8	> 0,8

### ON REQUEST:

#### -Water repellent melamine faced particle board

Same properties as the standard panel, but with water resistance:

Requirements	Standard	>3mm ≤4mm	>4mm ≤6mm	>6mm ≤13mm	>13mm ≤20mm	>20mm ≤25mm	>25mm ≤32mm	>32mm ≤40mm	>40mm
Swelling H <sub>2</sub> O 24hr(*) V100	EN317	-	-	< 11%	< 10%	< 10%	< 9%	< 9%	< 9%
Int. bond. after H <sub>2</sub> O N/mm <sup>2</sup> (*) V100	EN1087	-	-	> 0,15	> 0,14	> 0,12	> 0,11	> 0,10	> 0,09

#### -Fire resistant melamine faced particle board - B-s2, d0 EN 13986 EN13501-1 - Class B ASTM E84 NFPA 101

#### -Fsc certified melamine faced particle board - FSC mix 75% ICILA-COC-000343

### STORAGE AND HANDLING

Goods must be stored in a dry and ventilated place (relative air humidity 35%-65%). Do not store with inflammable substances. If exposed to direct sunlight, the laminate may deteriorate. Stacks should be stored correctly, at a manageable height to ensure stability. To avoid warping or damp stains, place the panels on pallets with adequate spaces. When handling the laminates, use suction pads or gloves. Machinery and equipment must be fitted with suitable aspiration systems.

### CLEANING & MAINTENANCE

The melamine surfaces are the most resistant among those used in the furniture field. For cleaning, it is preferable to choose a detergent for domestic use. It is recommended that you avoid spraying products directly onto the surface, as this may leave stains and marks; instead, it is preferable to apply the detergent product on a soft damp cloth, clean the surface and then rinse it. Avoid using abrasive products, bleach or highly chlorinated products or acids.



## MELAMINE FACED TSS - MDF BOARD PANELS

Medium Density Fiberboard (MDF) for interior use. A melamine decorative surface is placed on its top side through a pressing process. Available on request: FSC-COC, water repellent and fire resistant.

### technical characteristics

Resistance to abrasion	EN 14323	Printed Class 1, Unicolour Class 3A
Resistance to water steam	EN 14323	≥ Level 4
Resistance to scratches	EN 14323	≥ 1,5N
Resistance to stains	EN 14323	Group 1 & 2, class ≥ 4
Resistance to light	EN 14323	≥ 6 blue wool scale
Resistance to cracks	EN 14323	Class ≥ 3
Resistance to dry heat	EN 12722	Class B
Tendency to retain dirt	UNI 9300	Level ≥ 4

Requirements	Standard	>3mm ≤4mm	>4mm ≤6mm	>6mm ≤9mm	>9mm ≤12mm	>12mm ≤19mm	>19mm ≤30mm	>30mm
Elasticity modulus N/mm <sup>2</sup>	EN 310	> 3000	> 2700	> 2700	> 2500	> 2200	> 2100	> 1900
Internal bonding N/mm <sup>2</sup>	EN 319	≥ 0,65	≥ 0,65	≥ 0,65	≥ 0,60	≥ 0,55	≥ 0,55	≥ 0,50
Bending strength N/mm <sup>2</sup>	EN 310	≥ 23	≥ 23	≥ 23	≥ 22	≥ 20	≥ 18	≥ 15
Swelling 24 h	EN 317	≤ 35 %	≤ 30 %	≤ 17 %	≤ 15 %	≤ 12 %	≤ 10 %	≤ 8 %

### MDF board technical characteristics

<b>Composition</b>	Wood	Broad-leaved and coniferous wood fibres, 78 - 88%
	Adhesive	Urea – formaldehyde glue, 7 - 9%
	Additives	Water, 5 - 13% - Ammonium sulfate, 0.2% - Paraffin Traces
<b>Density</b>	EN 323	700-800 Kg/m <sup>3</sup>
<b>Moisture content</b>	EN 322	4 - 11%
<b>Sand content</b>	EN 3340	< 0.05 %
<b>Formaldehyde content</b>	EN 120	Group E1 <8mg/100g
	ASTM E1333-96	Group EPF-S (>8mm) <5mg/100g
<b>Dimensional tolerances</b>	Thickness vs. nominal value	≤15mm +/-0.2mm ≥15mm +/-0.3mm
	Thickness within the panel	EN 14323 +/-0.3mm
	Length and width	+/-5mm
<b>Planarity (both sides melamine faced ≥ 15mm)</b>	EN 14323	≤ 2mm/m
<b>Surface defects</b>	EN 14323	Spots: ≤2 mm <sup>2</sup> /m <sup>2</sup> Length: ≤20 mm/m <sup>2</sup>

#### ON REQUEST:

-Fire resistant melamine faced mdf board - B-s2, d0 EN 13986 EN13501-1

-FSC certified melamine faced mdf board - FSC mix 75% ICILA-COC-000343

#### STORAGE AND HANDLING

Goods must be stored in a dry and ventilated place (relative air humidity 35%-65%). Do not store with inflammable substances. If exposed to direct sunlight, the laminate may deteriorate. Stacks should be stored correctly, at a manageable height to ensure stability. To avoid warping or damp stains, place the panels on pallets with adequate spaces. When handling the laminates, use suction pads or gloves. Machinery and equipment must be fitted with suitable aspiration systems.

#### CLEANING & MAINTENANCE

The melamine surfaces are the most resistant among those used in the furniture field. For cleaning, it is preferable to choose a detergent for domestic use. It is recommended that you avoid spraying products directly onto the surface, as this may leave stains and marks; instead, it is preferable to apply the detergent product on a soft damp cloth, clean the surface and then rinse it. Avoid using abrasive products, bleach or highly chlorinated products or acids.

technical data sheet

- Chipboard E1 Carb 2 fire resistance
- Chipboard E1 Carb 2 standard

The continuous laminate CPL VGS (Vertical Grade Standard as defined by Standard EN 438) is a highly resistant decorative coating, recommended for vertical use. It is produced in rolls and made of a decorative paper, impregnated with melamine resin. It is supported by vegetable parchment and characterized by high flexibility; it varies according to the technical requirements and thickness. It can be further cut in rolls of width from 12 mm for the production of edges.

**technical characteristics**

Size for surfaces: Rolls of 1300mm Size for edges: Rolls from 12mm Thickness: From 0.20 to 0.40mm +/-0.10mm  
 Finish: Matt, semi matt or gloss Texture: Flat or textured

Resistance to abrasion	EN 438/2-10	≥ Level 2
Resistance to water steam	EN 438/2-14	≥ Level 4
Resistance to dry heat 180°c	EN 438/2-16	≥ Level 4
Resistance to scratches	EN 438/2-25	≥ Level 2
Resistance to stains	EN 438/2-26	Groups 1 and 2 =5; Group 3 ≥ 4
Resistance to light	EN 438/2-27	≥ 6 blue wool scale
Formability (method A)	EN 438/2-32	≥ Radius 2mm
Resistance to blistering	EN 438/2-34	≥ 15"
Formaldehyde emission	EN 717-2	≤ 3,5 mg/hm <sup>2</sup>

European norm EN 1350-1			French class NFP 92-501	German class DIN 4102	British class BS 476 Pts. 6 & 7	Italian class	USA class NFPA	Australian Asian class	Flammability	
fire behavior	smoke development	inflamed parts								
A1			M0	A1	Class 0				incombustible	
A2	S1	d0								incombustible
A2	S1	d1	M1	A2				Class A	Class A	not flammable
A2	S2	d0								
A2	S3	d1								
B	S1	d0								
B	S2	d0					Class 1			
B	S1	d1							Class B	
B	S3	d1		B1				Class B		
C	S1	d0	M2				Class 2			hardly flammable
C	S2	d1						Class C		
C	S3									
D	S1	d0	M3		Class 1				average flammable	
D	S2	d0								
D	S2	d1	M4		Class 2		Class 3	Class D	Class D	easily flammable
D	S3	d2			B2					
E					Class 3					highly flammable
F				B3			Class K	Class F		

**ON REQUEST: CHPL FSC CERTIFIED / FSC CW ICILA-CW-000343**

**STORAGE AND HANDLING**

Goods must be stored in a dry and ventilated place (relative air humidity 35%-65%). Do not store with inflammable substances. If exposed to direct sunlight, the laminate may deteriorate. Stacks should be stored correctly, at a manageable height to ensure stability. When handling the laminates, use suction pads or gloves. Machinery and equipment must be fitted with suitable aspiration systems.

**CLEANING & MAINTENANCE**

The melamine surfaces are the most resistant among those used in the furniture field. For cleaning, it is preferable to choose a detergent for domestic use. It is recommended that you avoid spraying products directly onto the surface, as this may leave stains and marks; instead, it is preferable to apply the detergent product on a soft damp cloth, clean the surface and then rinse it. Avoid using abrasive products, bleach or highly chlorinated products or acids.



## CHPL LAMINATES

CHPL laminates are produced in sheets and made of a decorative paper, impregnated with melamine resin. It has plastic properties and it is supported by kraft paper, impregnated with special thermosetting resins. CHPL laminates are available in the following types (specifications in accordance with Standard EN 438-1):

**VGS** (Vertical Grade Standard) recommended for vertical use. Standard thickness: 0,8 mm.

**VGP** (Vertical Grade Postforming) recommended for vertical use. Standard thickness: 0,6 mm.

**HGS** (Horizontal Grade Standard) recommended for horizontal use. Standard thickness: 0,8 mm.

**HGP** (Horizontal Grade Postforming) recommended for horizontal use. Standard thickness: 0,6 mm.

### technical characteristics

Width: 1310mm; Length: from 2440 to 5600mm Finish: Matt, semi matt or gloss Texture: Flat or textured

		<b>VGS</b> 0.80mm +/-0.10mm	<b>VGP</b> 0.60mm +/-0.10mm	<b>HGS</b> 0.80mm +/-0.10mm	<b>HGP</b> 0.60mm +/-0.10mm
Resistance to abrasion	EN 438/2-10	≥ Level 2 IP≥50 WP≥150	≥ Level 2 IP≥50 WP≥150	≥ Level 3 IP≥50 WP≥350	≥ Level 3 IP≥50 WP≥350
Resistance to water steam	EN 438/2-14	≥ Level 4	≥ Level 4	≥ Level 4	≥ Level 4
Resistance to dry heat	EN 438/2-16	≥ Level 4	≥ Level 4	≥ Level 4	≥ Level 4
Resistance to scratches	EN 438/2-25	≥ Level 3 ≥ 4N	≥ Level 3 ≥ 4N	≥ Level 3 ≥ 4N	≥ Level 3 ≥ 4N
Resistance to stains	EN 438/2-26	Groups 1,2 =5 Group 3 ≥4	Groups 1,2 =5 Group 3 ≥4	Groups 1,2 =5 Group 3 ≥4	Groups 1,2 =5 Group 3 ≥4
Resistance to light	EN 438/2-27	≥ 6 blue wool scale	≥ 6 blue wool scale	≥ 6 blue wool scale	≥ 6 blue wool scale
Formability method A	EN 438/2-32	-	R ≤ 10 x nominal thickness	-	R ≤ 10 x nominal thickness
Resistance to blistering	EN 438/2-34	≥ 15"	≥ 15"	≥ 15"	≥ 15"
Formaldehyde emission	EN 717-2	≤ 3,5 mg/hm <sup>2</sup>	≤ 3,5 mg/hm <sup>2</sup>	≤ 3,5 mg/hm <sup>2</sup>	≤ 3,5 mg/hm <sup>2</sup>

**ON REQUEST: CHPL FSC CERTIFIED / FSC CWICILA-CW-000343**

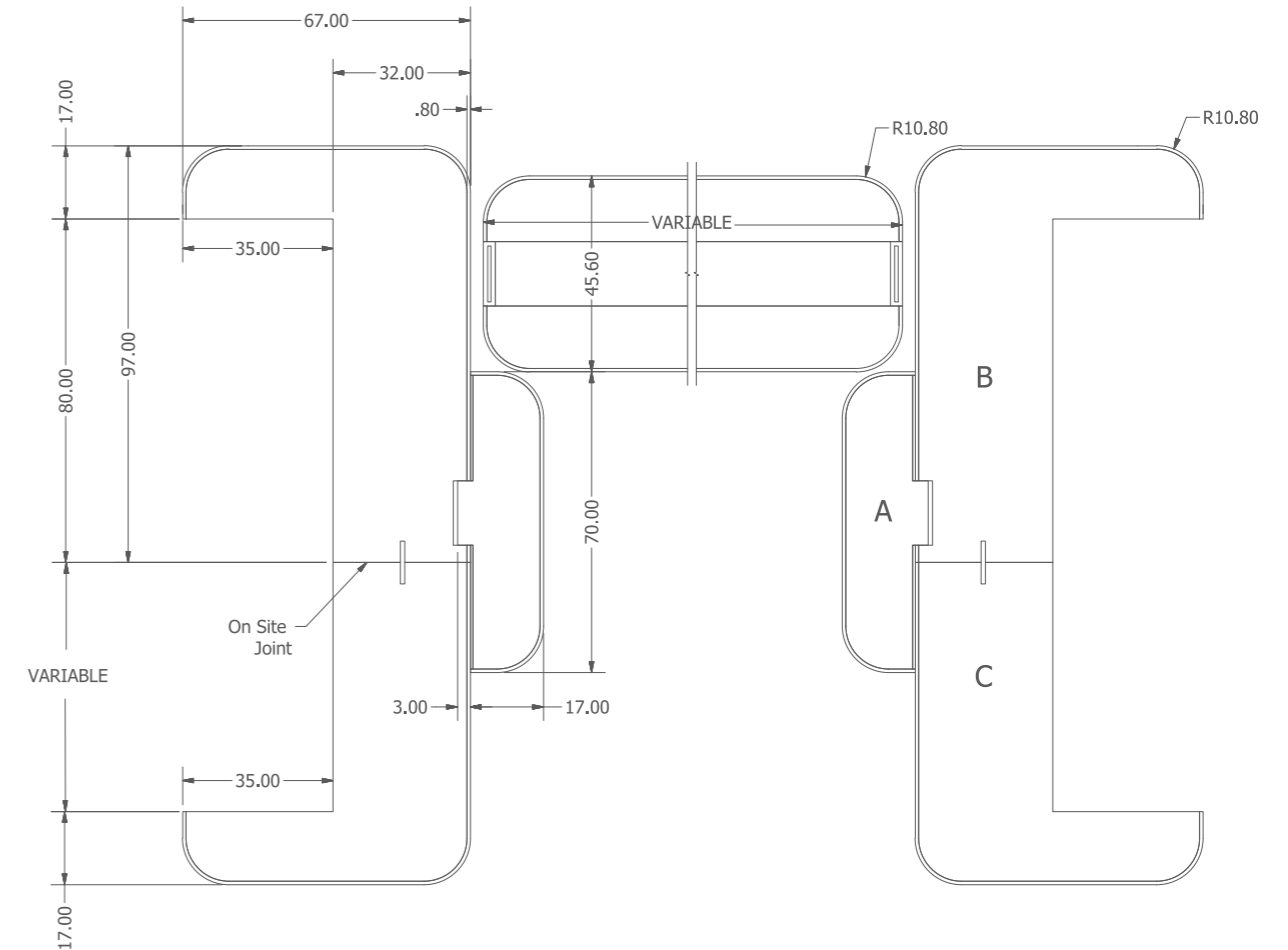
### STORAGE AND HANDLING

Goods must be stored in a dry and ventilated place (relative air humidity 35%-65%). Do not store with inflammable substances. If exposed to direct sunlight, the laminate may deteriorate. Stacks should be stored correctly, at a manageable height to ensure stability. To avoid warping or damp stains, place the panels on pallets with adequate spaces. When handling the laminates, use suction pads or gloves. Machinery and equipment must be fitted with suitable aspiration systems.

### CLEANING & MAINTENANCE

The melamine surfaces are the most resistant among those used in the furniture field. For cleaning, it is preferable to choose a detergent for domestic use. It is recommended that you avoid spraying products directly onto the surface, as this may leave stains and marks; instead, it is preferable to apply the detergent product on a soft damp cloth, clean the surface and then rinse it. Avoid using abrasive products, bleach or highly chlorinated products or acids.

## TYPICAL HPL DOOR & FRAME DETAIL



### Q Mark FD30 HPL wrapped door and frame

Door - 44mm Door with 0.8mm HPL - 45.6mm Overall

#### Frame

Part A - Door stop - MDF, 0.8mm HPL, 0.6mm Balancer

Part B - Fixed size radius frame detail - MDF, 0.8mm HPL

Part C - Variable size radius frame detail - MDF, 0.8mm HPL

## FUSION

Research, innovation and technology are the distinctive features of the new FUSION line of products, deriving from the commitment and passion of Cleaf Research Lab.

FUSION results from the incorporation of textiles and threads into panels and laminated surfaces through state of the art technology. This new range of products provides the world of interior design with highly innovative solutions, both in terms of aesthetics and functionality.

FUSION is based on creativity: new surfaces with a versatile, original and eclectic character, converting the latest trends into a surprising collection of textures and palettes, offering a whole new range of exquisite solutions. The line was entirely created and developed with Italian expertise: the use of high-profile techniques and exclusive processing result in top quality and creativity, reflecting Cleaf's commitment to innovation.

### FUSION is available in five versions:

#### HYPERTEX R2

Thickness: 0.15mm.

The 23g/m<sup>2</sup> TNT support makes the product ideal for MDF or aluminium profiles wrapping.

#### HYPERTEX R3

Thickness: 0.20mm

Supported by parchment of 70gr/m<sup>2</sup>. This product is ideal for wrapping profile and frames with multiple curves and very sharp radiuses, as well as in cases where defects of support (such as matching of MDF + pine) request a product with a higher covering ability.

#### CHPL FUSION

Thickness: 0.6mm

Produced by pressing with phenolic kraft papers, ideal for further wrapping of panels.

#### ABILAM

Thickness: 4mm

FUSION surfaces are glued onto ABS support with polyurethane adhesive. The obtained product is rigid, light and high-resistant to humidity.

#### TSS - PANNELLO

Thickness: from 12 to 50mm.

With chipboard and MDF, the FUSION surfaces offer the possibility to produce many different components for furniture or interior design.

### STORAGE AND HANDLING

Goods must be stored in a dry and ventilated place (relative air humidity 35%-65%). Do not store with inflammable substances.

If exposed to direct sunlight, the laminate may deteriorate. Stacks should be stored correctly, at a manageable height to ensure stability. When handling the laminates, use suction pads or gloves. Machinery and equipment must be fitted with suitable aspiration systems.

### CLEANING & MAINTENANCE

The FUSION line was created with a combination of threads and fabrics, embedded in surfaces. It is successfully used in the world of interior design in order to provide solutions with a strong aesthetic and functional character. The resin partially saturates the fabric protecting the fibres; although on the one hand, the thread on the surface offers an aesthetic effect and a unique texture to the product, on the other hand, it limits the resistance to staining agents. If the Fusion surface comes in contact with dirt, oil or contaminants, it is recommended to immediately remove it, by blotting the stain with a cloth soaked in water. Always avoid the use of abrasives or solvents. In case of persistent or dry stains, see the table below:

Fruit juice, marmalade, syrup, milk, tea, coffee, liqueurs, wine, soap, ink. - Cold water.

Fats, sauces, dry blood stains, wine and liqueurs, eggs. - Cold water and detergent for domestic use.

Jelly, carbon black, PVA, watercolours, organic waste. - Hot water and detergent for domestic use.

Observe the cleaning result after the moisture has evaporated. The wet fabric surface always becomes darker, but as the fibre dries, it returns to its initial colour. If spots or stains persist after cleaning, use a domestic stain remover. To test the reaction of the product to the stain remover, you may try it on a less visible area.

### technical characteristics

Resistance to abrasion	EN 14323	IP <50 rev WP<150 rev
Resistance to light	EN 15187	> 6 blue wool scale
Resistance to stains	EN 12720	Class B (UNI 10944)



## HYPERFLEX

Hyperflex is an ultra-thin decorative laminate with a thickness of 0,1mm. Thanks to its excellent flexibility, it is the deal product for coating profiles, skirting boards and the top of wardrobes. It is not necessary to apply further coating since the high-resistance properties of the product are already sufficient in order to protect its surface. It is available in three versions:

### HYPERFLEX R1

Thickness 0,10mm, single layer.

### HYPERFLEX R2

Thickness 0,15mm. Thanks to the 23g/m<sup>2</sup> TNT support, the product is ideal for coating moulded door panels and for any other application requesting a higher resistance compared to product R1.

### HYPERFLEX R3

Thickness 0,20mm. Supported by parchment of 70gr/m<sup>2</sup>. This product is ideal for wrapping profile and frames with multiple curves and very sharp radiuses, as well as in cases where defects of support (such as matching of MDF +pine) request a product with a higher covering ability.

### technical characteristics

Size for surfaces: Rolls of 1300mm Thickness: Nominal thickness +/-0.05mm Finish: Matt, semi matt or gloss  
Texture: Flat or textured

Resistance to abrasion	UNI 9115	Level $\geq$ 4
Tendency to retain dirt	UNI 9300	Level $\geq$ 4
Resistance to scratches	UNI 9428	Level $\geq$ 3
Resistance to stains	EN 14323	Group 1 $\geq$ 4; Group 2 $\geq$ 3
Resistance to light	UNI 9427	$\geq$ 5 grayscale
Formability (method A)	EN 438/2-32	Any radius
Formaldehyde emission	EN 717-2	$\leq$ 3,5 mg/hm <sup>2</sup>

### ON REQUEST: CHPL FSC CERTIFIED / FSC CW ICILA-CW-000343

#### STORAGE AND HANDLING

Goods must be stored in a dry and ventilated place (relative air humidity 35%-65%). Do not store with inflammable substances. If exposed to direct sunlight, the laminate may deteriorate. Stacks should be stored correctly, at a manageable height to ensure stability. When handling the laminates, use suction pads or gloves. Machinery and equipment must be fitted with suitable aspiration systems.

#### CLEANING & MAINTENANCE

For cleaning, it is preferable to choose a detergent for domestic use. It is recommended that you avoid spraying products directly onto the surface, as this may leave stains and marks; instead, it is preferable to apply the detergent product on a soft damp cloth, clean the surface and then rinse it. Avoid using abrasive products, bleach or highly chlorinated products or acids.

## KRISTALL PANELS

The Kristall Panels are made of P2 particle boards, laminated in both sides with ABS-PMMA sheet. The lamination polyurethane glue enables an excellent performance in terms of adhesion, temperature and humidity resistance. A thick acrylic surface guarantees excellent aesthetic characteristics, as well as high resistance to scratches, compared to a lacquered panel, and high resistance to light and stains. All panels feature a protection film on both

### technical characteristics

Size: **2790 x 1300 mm** Standard thickness: **20 and 23 mm +/-0.2mm** Back side: Same as on the front side  
Gloss 60°:  $\geq$  85

Resistance to scratches	EN 14323	$\geq$ 0.4N
Resistance to stains	EN 14323	Groups 1 e 2 $\geq$ 4
Resistance to light	EN 15187	$\geq$ 6 blue wool scale
Formaldehyde emission		In accordance with standard CARB 2
Colour tolerances		From $\leq$ 0.8

### ON REQUEST: FSC CERTIFIED MELAMINE FACED PARTICLE BOARD - FSC mix 75% ICILA-COC-000343

#### STORAGE AND HANDLING

Goods must be stored in a dry and ventilated place (relative air humidity 35%-65%). Do not store with inflammable substances. If exposed to direct sunlight, the panel may deteriorate. Stacks should be stored correctly, at a manageable height to ensure stability. To avoid warping or damp stains, place the panels on pallets with adequate spaces. When handling the laminates, use suction pads or gloves. Machinery and equipment must be fitted with suitable aspiration systems. During machining, cutting, edging, drilling etc., you must ensure that the area is clean in order to prevent impurities from entering into the panels, and prevent from damages that may be caused to the surface during stacking.

#### CLEANING & MAINTENANCE

Remove the protective film only after the final installation of the product. Immediately after film removal, it is advisable to clean the surface with a soft damp cloth, water and neutral soap. This enables a significant enhancement of the final hardness of the surface. Avoid the use of cleaning sponges and/or abrasive products. Instead, use a soft cloth, neutral soap and water. Small scratches can be removed with polish, suitable for acrylic surfaces.

## DOOR EDGE

The Door Edge is a decorative coating consisting of a special paperboard, single-coloured or printed, impregnated and lacquered. To ensure excellent adhesion with any type of glue, the material is provided with a sanded back. No further lacquering is needed as its good properties are already sufficient to protect the surface of the product.

### technical characteristics

Thickness: 0.25 +/-0.05mm Finish: Matt, semi matt or gloss Texture: Flat or textured

RESISTANCE TO ABRASION	EN 14322	Class 1
CROSS-CUTTING	ISO 2409	≤ 1
RESISTANCE TO SCRATCHES	UNI 9428	≥ 0,8N
RESISTANCE TO STAINS	UNI 10944	Class E
RESISTANCE TO LIGHT	UNI 9427	≥ 5 grayscale
FORMABILITY (method A)	EN 438/2-32	Any radius
FORMALDEHYDE EMISSION	EN 717-2	≤ 3,5 mg/hm <sup>2</sup>

**ON REQUEST: Door Edge FSC certified - FSC CW ICILA-CW-000343**

### STORAGE AND HANDLING

Goods must be stored in a dry and ventilated place (relative air humidity 35%-65%). Do not store with inflammable substances. If exposed to direct sunlight, the laminate may deteriorate. Stacks should be stored correctly, at a manageable height to ensure stability. When handling the laminates, use suction pads or gloves. Machinery and equipment must be fitted with suitable aspiration systems.

### CLEANING & MAINTENANCE

For cleaning, it is preferable to choose a detergent for domestic use. It is recommended that you avoid spraying products directly onto the surface, as this may leave stains and marks; instead, it is preferable to apply the detergent product on a soft damp cloth, clean the surface and then rinse it. Avoid using abrasive products, bleach or highly chlorinated products or acids.

## MELAMINE TSS SURFACES CLEANING INSTRUCTIONS

The melamine surfaces are the most resistant among those used in the furniture field. In case of persistent or dry stains, it is recommended to use water, soapy water or ethylic alcohol and acetone according to the following table:

	Cold Water	Cold water and detergent for domestic use	Hot water and detergent for domestic use	Alcohol 50%	Acetone
Fruit juice, marmalade, syrup, milk, tea, coffee, liqueurs, wine, soap, ink	*				
Fats, sauces, dry blood stains, wine and liqueurs, eggs		*			
Jelly, carbon black, vinyl glue, watercolours, organic waste			*		
Vegetable oil, pens, magic markers, foundation make-up, hair spray				*	*
Nail polish, linseed oil					*

### Smooth or slightly embossed surfaces

It is recommended that you avoid spraying products directly onto the surface, as this may leave stains and marks; instead, it is preferable to apply the detergent product on a soft damp cloth, clean the surface and then rinse it. Avoid using abrasive products, bleach or highly chlorinated products or acids.

### Deeply embossed surfaces

Clean with a soft cloth using the aforementioned solvents, as per the above table. In case of deep surfaces (such as Matrix, Orion, Nadir...) and very light colours, the aforementioned cleaning procedure may be inadequate or insufficient in order to remove the dirt from the furrows of the deep surfaces. In this case, it is recommended to delicately clean that area, by using a melamine magic sponge: wet the sponge with tepid water and squeeze it. Avoid using abrasive sponges, as they may damage the surface.

Upon request, a cleaning kit including a mild detergent and a magic sponge may be sent by CLEAF to the interested customers.



surface characteristics

**COMPOSITION - INFORMATION ON INGREDIENTS**

Cellulose supports impregnated with phenolic and amino-resins and pressed with a thermosetting cycle with high pressure and temperature. No hazardous component according CEE 67/548.

**HAZARDS IDENTIFICATION**

No hazard for humans or the environment.

**FIRST AID MEASURES**

Nothing to report

**FIRE FIGHTING MEASURES**

Means of extinction: CO2, foam, powder.

**ACCIDENTAL SPILL - RELEASE MEASURES**

Not applicable.

**HANDLING AND STORAGE**

Storage of the product at room temperature and in well ventilated area.-

**EXPOSURE CONTROLS - PERSONAL PROTECTION**

Nothing to report

**PHYSICAL AND CHEMICAL PROPERTIES**

- Specific weight: 1,4 kg/m<sup>2</sup>
- Calorific value: 4.500 cal/g
- Thickness from: 0.6 to 1.2 mm

**STABILITY AND REACTIVITY**

- Stability: the product is stable in normal storage conditions
- Conditions to avoid: high temperatures, exposure to direct sunlight

**TOXICOLOGICAL INFORMATION**

Not expected to be harmful. Decomposition products are irritant for eyes and mucous membranes.

**ECOLOGICAL INFORMATION**

Do not release into the environment.

**DISPOSAL CONSIDERATIONS**

Disposal of wastes and used containers must be in accordance with applicable federal, state and local regulations.

**TRANSPORT INFORMATION**

This product is not recommended for transportation.

**REGULATORY INFORMATION**

Not to be labeled.  
No safety symbols.

**OTHER INFORMATION**

Verify the product will be correctly used in all its applications.  
Main application: decorative surface for furniture.

surface characteristics

**COMPOSITION / INFORMATION ON INGREDIENTS**

Panel: Wood 78-88% urea-formaldehyde condensation adhesive 7-9%, water 7-13%, ammonium sulfate 0.2%, paraffin tracks. Cellulose-based decorative paper impregnated with melamine formaldehyde resins. Formaldehyde (CAS No. 50-00-0) Total extractable <0.008%, Class E1.

**HAZARD IDENTIFICATION**

The product is not dangerous by inhalation, contact with skin or if swallowed.

**FIRST AID MEASURES**

Nothing to be informed

**FIRE FIGHTING MEASURES**

Extinguishing media: foam, dry chemical, CO2.  
Exposure to particular risks: possible toxic vapor of formaldehyde.  
Protective Equipment: indoors wear suitable breathing equipment.  
Special precautions: None

**ACCIDENTAL RELEASE MEASURES**

Not applicable

**HANDLING AND STORAGE**

The material should be stored in sunny and dry area.

**EXPOSURE CONTROL/PERSONAL PROTECTION**

- During working out of the panel:
- Exposure check (application D.leg. No. 66/99)
  - Breath protection
  - Eye protection
  - Skin protection

**PHYSICAL AND CHEMICAL PROPERTIES**

Appearance solid goods  
Weight 500 - 700 kg/m<sup>3</sup>  
Dust ignition temperature 100°C

**STABILITY AND REACTIVITY**

Thermal decomposition may produce toxic gas including CO, aldehydes and organic acids. Avoid oxidizing agents and keep away from ignition sources

**TOXICOLOGICAL INFORMATION**

No data are available on this product.

**ECOLOGICAL INFORMATION**

Don't throw away the product in the environment

**DISPOSAL CONSIDERATIONS**

Disposal should be done in an approved area in compliance with applicable laws.  
Do not dump. EU Waste class: 170201/030105.

**TRANSPORT INFORMATION**

Road (ADR): NOT DANGEROUS  
Railway (RID): NOT DANGEROUS  
Sea (IMO): NOT DANGEROUS  
Air (ICAO/IATA): NOT DANGEROUS

**REGULATORY INFORMATION**

Rules on classification, packaging and labeling  
91/155/CEE 67/548/CEE DM/10/12/1\898 DM/28/01/1009

**OTHER INFORMATION**

This MSDS has been prepared according to our information and refer only to the product concerned. The Company assumes no liability for personal injury or property damage resulting from improper use of the contents of this tab. The user must verify the suitability and completeness of information regarding specific use



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## FSC CERTIFICATION



The mark of  
responsible forestry

### XyloCleaf and its commitment to the environment

Due to the considerable volumes of lumber consumed during the manufacture of our products, we bear a huge responsibility to our clients in ensuring the sustainability of our raw materials. XyloCleaf are proud to hold FSC® Certification which in turn allows us to offer Forest Stewardship Council® certified products for specified projects. By working closely with our factories we ensure that all our products are produced using sustainable resources. Where required FSC Certified products can be provided for larger projects if so specified. Please refer to our sales office for further information.





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