

PREMIUM
WOOD HYBRID
& COMPOSITES



CONTENTS

4	THE SHOCK
6	THE ALTERNATIVE
8	PREMIUM
12	LONG LASTING
16	ADAPTABLE
20	LOW CARBON FOOTPRINT
22	EASY
24	ABSOLUTE
26	WOOD HYBRID SYSTEM - WHS
32	CO-EXTRUDED DOUBLE LAYER TECHNOLOGY
34	HIGH DENSITY TECHNOLOGY
36	COLOURS
37	ACCESSORIES
38	CERTIFICATES
39	SERVICES

- ◆ Hybrid Wood System
- ◆ Composite wood boards - Double layer technology
- ◆ Composite wood boards - High density technology

GEOLAM

Geolam, the inventor of composite wood.

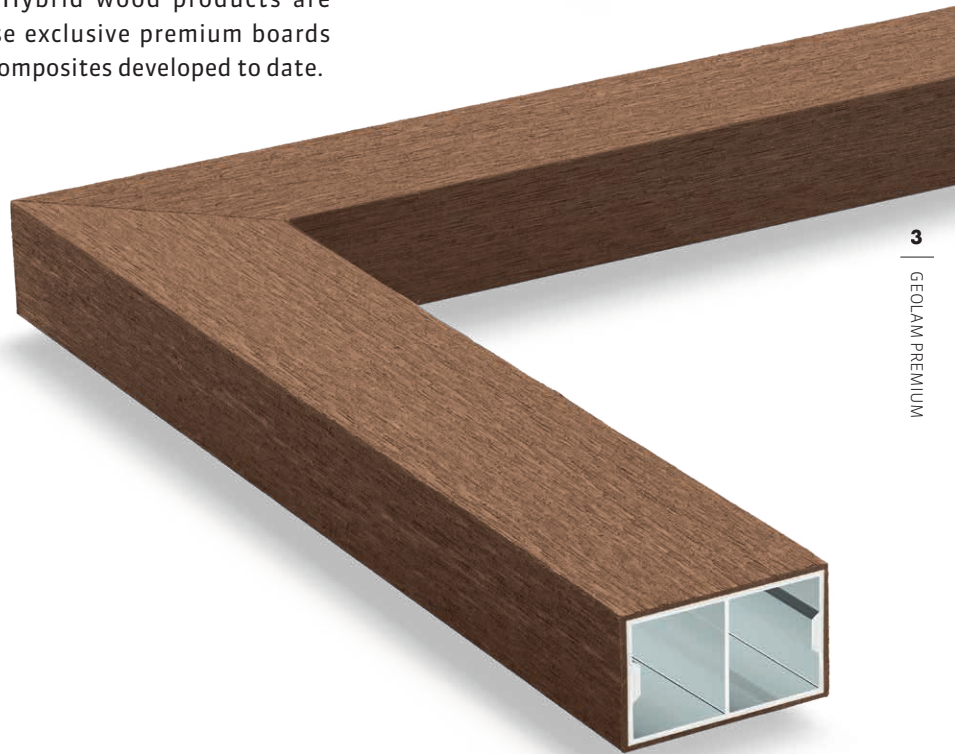
1975 Composite wood invented in Japan.

1982 First international patent : The world discovers composite wood as the product is commercialized.

1992 Foam technology is developed : lighter and stronger, it outclasses solid composite boards.

2002 Co-extrusion or how to take advantage of distinct materials' characteristics.


2008 Hybrid wood : Hybrid wood products are developed. These exclusive premium boards out-perform all composites developed to date.



THE SHOCK

Geolam Premium wood composites
are the modern alternative
to tropical hardwoods.





Geolam was built on a sound philosophy. Over 45 years ago, Sadao Nishibori, a dealer in tropical timber from Japan, invented an entirely innovative wood composite. He found his inspiration on a trip through the forests of Indonesia, where he had seen at first hand the consequences of widespread and uncontrolled deforestation. For a cultured, educated and sensitive man, raised in the Shinto tradition with a profound respect for nature, it was a shock. Sadao Nishibori subsequently dedicated himself to the invention of a tropical wood substitute, more respectful of the environment: the wood composite.

The qualities of rare tropical hardwoods served as a standard in developing the Geolam wood composite. He took recycled softwood and recycled polymer resin (polypropylene) to create a material that can now look back on four decades of refinement and whose defining features include a natural wood look coupled with outstanding durability. This was the dawn of the 'wood-polymer composite' (WPC), a material inspired by nature and returning the favour by its low carbon footprint.

Healthcare center,
Tomblaine, France.



THE ALTERNATIVE

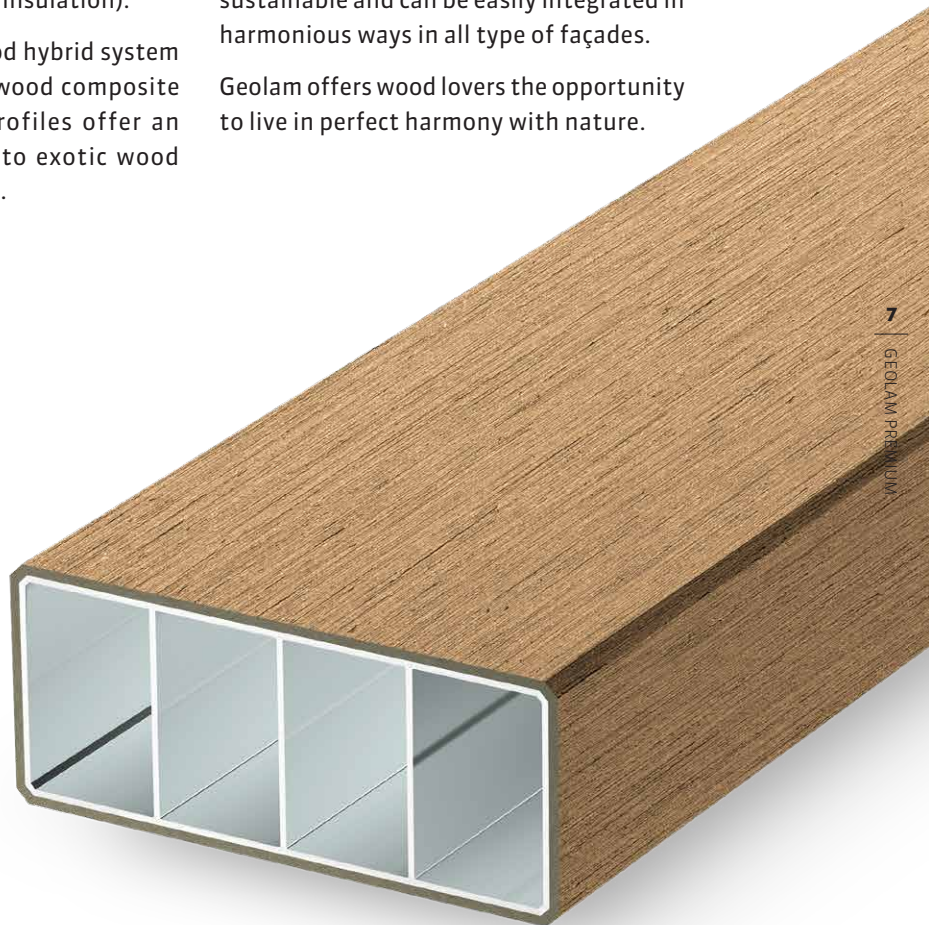
Geolam's Wood Hybrid System (WHS) façades are more sustainable than tropical hardwood or composite wood façades.

Architects often specify wood when designing façades, as well as other architectural features such as latticework, blinds, trellises, awnings, shelters or pergolas. Designers appreciate the advantages of exotic wood for both open and closed structures, both for its aesthetics as well as its functionality (coziness, sun protection, insulation).

The Geolam Premium wood hybrid system (WHS) profiles combine wood composite with aluminum. WHS profiles offer an eco-friendly alternative to exotic wood architectural components.

Geolam Premium hybrid profiles offer significant advantages compared to exotic woods: they are maintenance free and respect the environment. In addition, the Geolam wood hybrid system (WHS) is superior to the wood plastic composite (WPC): the boards are more durable, more sustainable and can be easily integrated in harmonious ways in all type of façades.

Geolam offers wood lovers the opportunity to live in perfect harmony with nature.



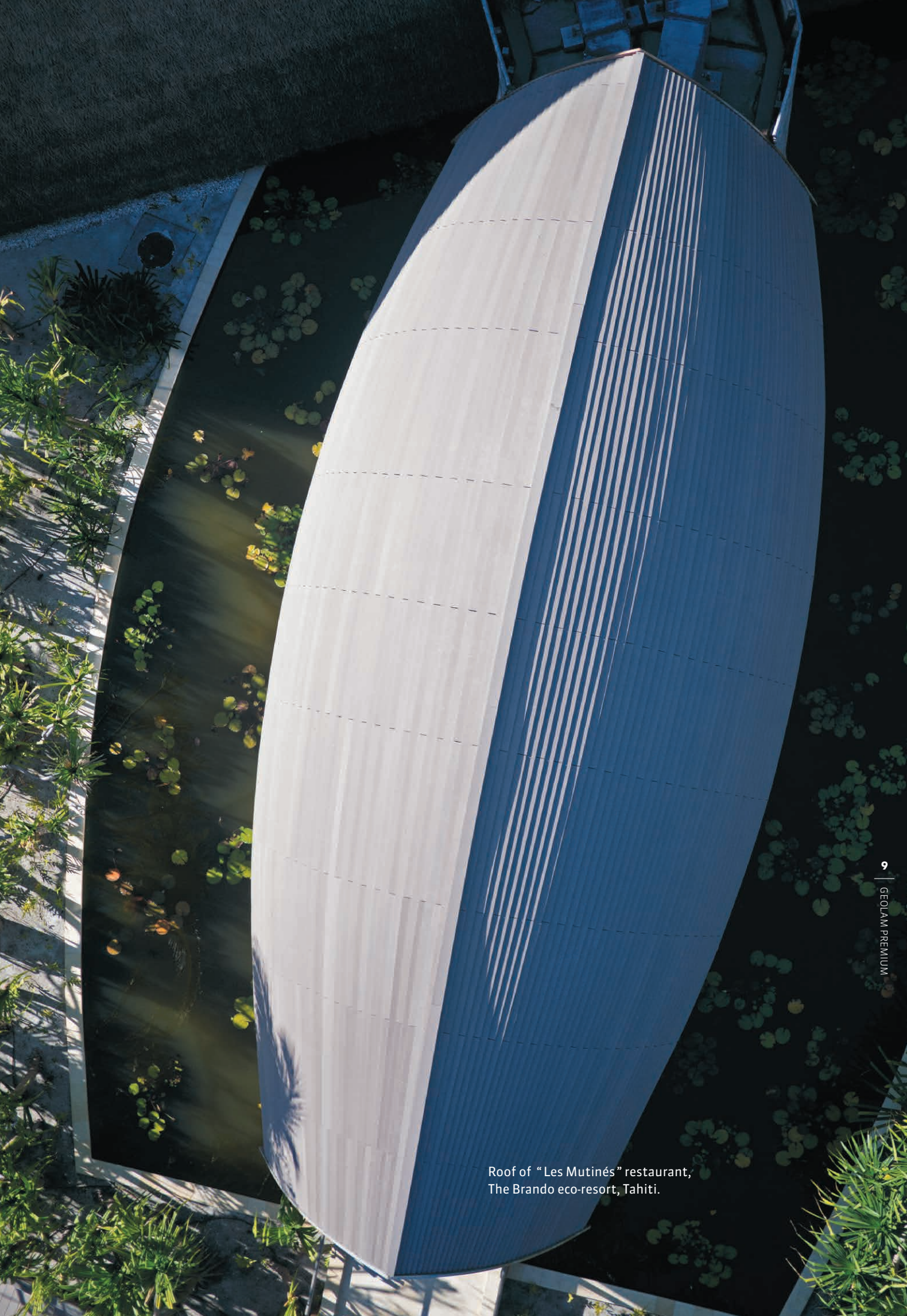
PREMIUM

Breeding excellence,
from design to installation.

Geolam is the world's premium brand of wood-plastic composite (WPC). This comes about by embracing premium raw materials, premium technologies and premium manufacturing processes. Geolam has led the world in innovation of wood - plastic composites and holds a large number of patents for both products and processes.

Geolam WPC were developed by engineers applying the highest standards for users who insisted upon the most stringent demands. This perspective has led to many innovative and unique solutions.

And what makes Geolam's premium standard so special, is the extraordinary natural look and technical superiority that has won the hearts of both architects and designers in evoking a sense of exclusiveness and serenity and helping to achieve their design objectives.



Roof of “Les Mutinés” restaurant,
The Brando eco-resort, Tahiti.



10
GEO LA M PREMIUM

NOUVELLE CARTE DE PASTA 1.
Le Menu Signature
44 € TOUT COMPRIS - ALL INCLUSIVE



275



McDonald's



McDonald's Restaurant Chain

cladding, louvre

Paris,
France

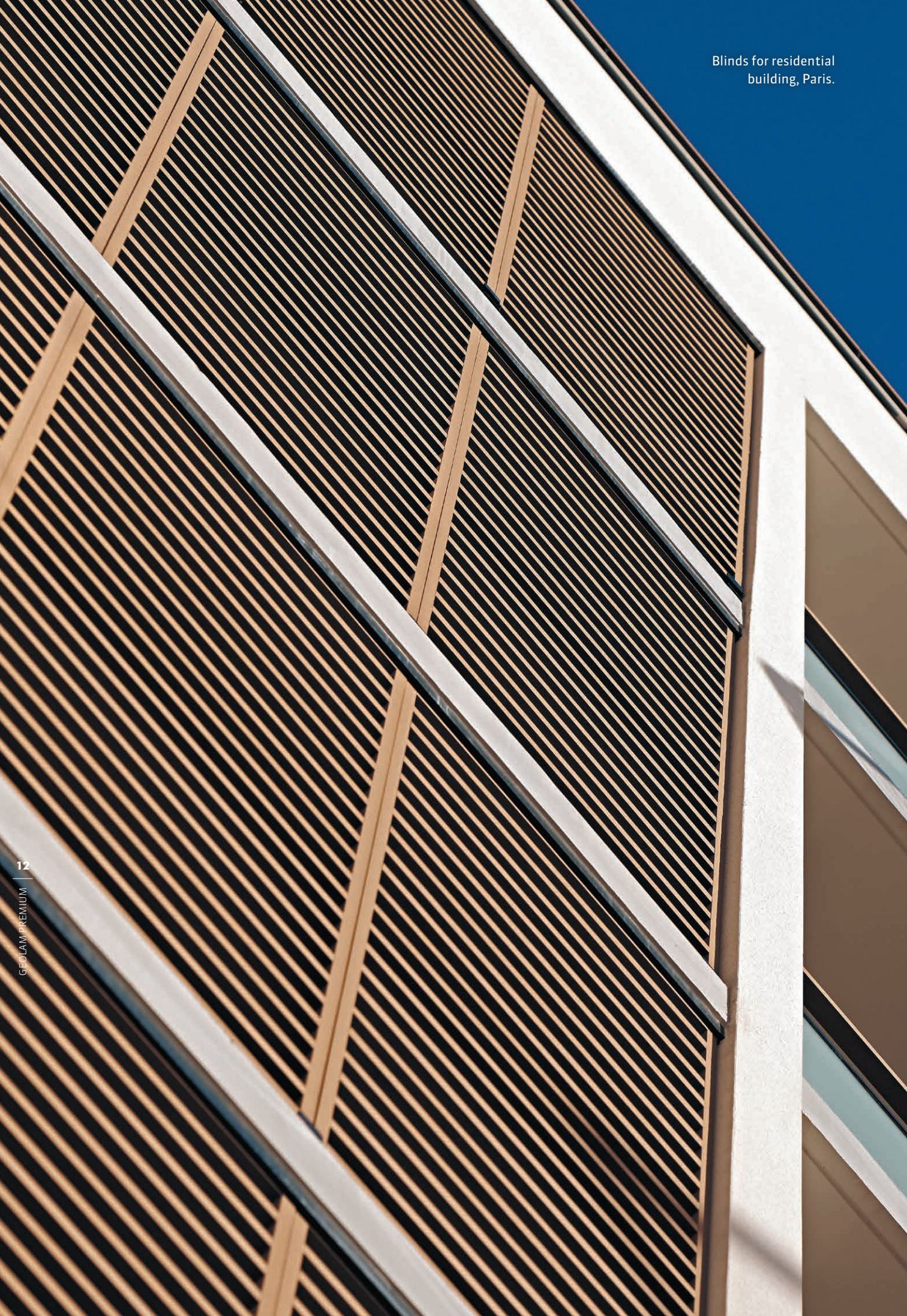
Built : 2015

Type : Soleo 6008



Colour : Teak

Blinds for residential
building, Paris.



LONG LASTING





Exceptional features set the benchmark for wood façades and the creation of indoor and outdoor spaces.

A façade built with Geolam Premium hybrid profiles exhibits the exceptional aesthetic qualities of natural wood, but it does not have its fragility. Unlike the hardwood that bleeds tannin, changes colour, warps and generates splinters, the WHS Geolam profiles are durable, dimensionally stable,

remain perfectly straight and can be installed even under the most extreme climatic conditions. Geolam boards do not bleed tannins nor splinter. They are well adapted for indoor applications as well due to their fire resistance.





WOOD

Advantages compared to wood.

-  Sustainable and durable. No cracking, no splintering, no warping. Does not reject tannin.
-  Maintenance free. Can be cleaned with water. No greying, no fading.
-  No finishing required. Endures extreme climates. No rotting, no mould or insect-damage.
-  Low fire reaction. See page 38




WPC

Advantages compared to other WPCs.

-  Aesthetic, natural texture. Lightweight. No PVC, no formaldehyde.
-  Bendable. Versatility of uses. Customized lengths and radius.
-  Dimensional stability. High mechanical strength. Easily installed. Durable product makes for a safe investment.
-  Low fire reaction. See page 38

ALUMINUM

Advantages compared to lacquered aluminum.

-  Natural look and feel. Ready to use. No additional stain, painting or other finishing required.
-  Repairs of dents made possible through addition of material. Can be ripped, sanded or corrected on site, if necessary without dismantling the profile from façade.
-  Best thermal insulation. Best phonic insulation. Best wind and vibration resistance.





Style outlets shopping mall

Cladding, louvre, street furniture

Barcelona,
Spain

Built : 2016

Type : Duo 0014, Careo 0029 & 6035



Colour : Rosewood





Cladding shopping mall, Spain.



ADAPTABLE

The alliance of natural features
and contemporary aesthetics.

Geolam Premium WPC overrides the first WPC generation. Japanese engineering art has succeeded in developing a novel wood composite material that while keeping the same stability specifications - looks, feels and smells like solid wood, can be worked like solid wood, has a minimal ecological footprint and is easy to install.

Next to the established horizontal application for decking installations certain Premium WPC and WHS profiles can also be used for façade cladding and as a building material for furniture and other wood-like

applications. The solid wood-like character means boards that can be worked with tools and machines used for wood. Geolam is the first brand to provide boards that can be used for all outdoor applications: decks, ceilings, walls, façades, furniture, architectural features.





LAS TERRAZAS

restaurantes y cir

Bonaire

ZAS

ne

100 MONTADITOS

GEOLAM PREMIUM



Bonaire shopping mall

Cladding, pergola, louvre, bent cladding

Valencia,
Spain

Built : 2016

Type : Soleo 1263, 6029/30/33 & Duo 0014



Colour : Rosewood

LOW CARBON FOOTPRINT

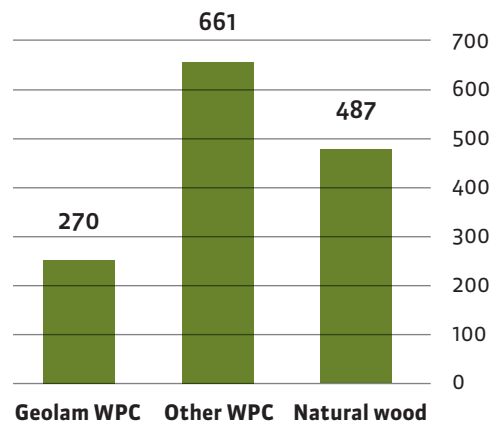
Geolam's premium hybrid boards – an ecologically responsible approach.

The issue of durability and of reduced carbon footprint is becoming increasingly important in the construction sector. An ecological building contributes to human health, respects the planet, and increases building value.

The Japanese Wood Plastic Industry Committee completed these tests in February 2008. They showed that the manufacturing of Geolam composite woods has a smaller ecologic footprint than do tropical woods and all other composite woods. Thanks to the exclusive use of recycled softwoods and of recycled polypropylene, the technology used allows for the reduction of CO₂ during the production by 53.6% compared to conventional products.

In addition, because Geolam is manufactured with recycled materials, our products themselves are 100% recyclable, a perfect example of ecological stewardship.

Life cycle CO₂ emissions in kg





Eco-Resort : The Brando

Tetiaroa,
Tahiti

Built : 2014

Type : Qualita 020C & Integra 0021



Colour : Paldao



EASY

Maintenance needs no more than simple cleaning.

Geolam decking and façades do not generate maintenance and servicing costs. There is no greying, fading or rotting. No mould or insect-damage. No subsequent applications of paint or varnish.

Clearing and cleaning are sufficient. Simply sweep or water spray to remove any dirt. Any damage to the surface is easily fixed and graffiti can be removed with cleaning products or by sanding. The premium wood composite with its particularly heat-resistant polypropylene component promotes longevity while preserving the authentic wood-like character even under extreme conditions.



ABSOLUTE

Zero maintenance, zero toxicity, withstands extreme weather and resists fire.

The art of a commercially viable and ecological production without any toxic content lies in Geolam's highly sophisticated methods of sorting and preparing the raw materials, achieving zero moisture content in all wood fibres. No other manufacturer has achieved this. In addition, the even blending of wood

with polypropylene before the extrusion process further enhances the quality of our products. Geolam boards do not require any subsequent treatment contrary to other products on the market, it is not necessary to paint, varnish, stain or oil.





Ibiza Gran Hotel

Ibiza,
Spain

Built : 2018

Type : Soleo 6031 

Colour : Teak



High-tech

WHS HYBRID TECHNOLOGY

Leading edge, a flair for engineering.

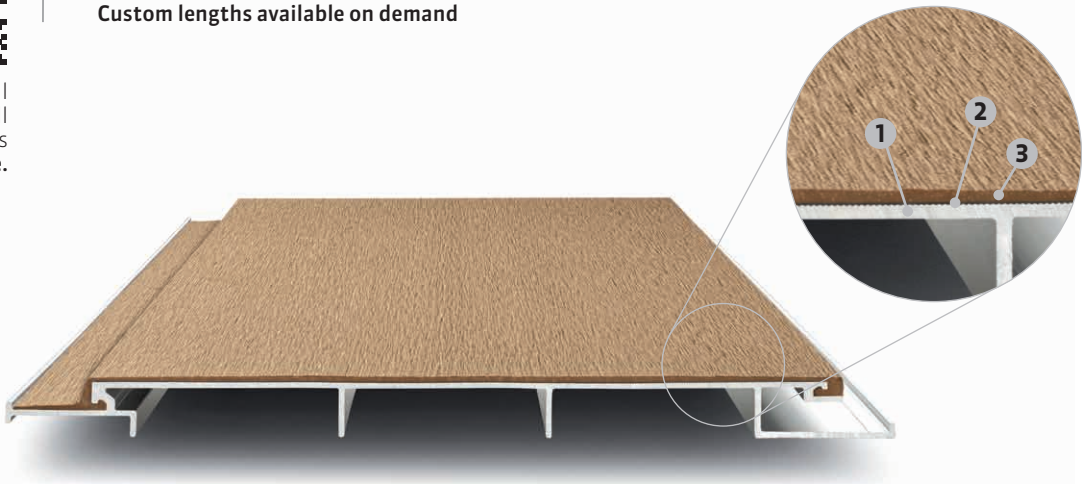
EASY IMPLEMENTATION, SIMILAR TO ALUMINUM PROFILES

Standard length for all types : 3000 mm | 9 ft 10 in

Custom lengths available on demand



Detailed technical specifications as well as build examples on our website.



As the first and only provider, Geolam offered its Wood Hybrid Systems (WHS) for façades, decks and roofs to the global marketplace in 2012. These WHS profiles are the result of an innovative hybrid technology, which enables heterogeneous materials to be successfully extruded together under heat.

Three layers of different materials undergo our patented triple extrusion process. Light, stable aluminum makes up the core. The connecting intermediate layer is made of a copolymer resin. The protective layer, lends the profiles the characteristics of tropical wood. This innovative combination of materials gives our profiles exceptionally superior features. They are three times lighter, four times more stable and eight times more rigid than WPC profiles. In addition, one single Geolam WHS profile can be bent to different radii and in different directions. Wood, on the other hand, has to be bent in the direction of the fibre only.

1. RECYCLED ALUMINUM (6063T5)

As the core of the material, aluminum gives lightness and stability. The light metal allows safe and grid-free mounting options, which significantly expands the span between 2 points of attachment.

2. COPOLYMER RESIN

In the triple extrusion process, the intermediate layer of copolymer resin inseparably merges the aluminum core with the outer layer. This resin is very strong and so firmly connected to the two materials that the hybrid profiles can be bent into different radii (smallest radius : 400 mm or 16 in).

3. OUTER SKIN

The outer layer in WPC is available in many colours, but especially in different finishes, too. The base colour does not change over time, even without maintenance. The dimensional stability of this hybrid material is remarkable, even when exposed to extreme temperatures and weather conditions. Even when exposed to humidity, its dimensional stability outclasses all types of composite wood.

SOLEO RANGE

Louvres, façade cladding, sun shields, screens, bannisters, balustrades and handrails.



Soleo	Width (usable)	Thickness	Feature	
6027	40 mm 1½ in	30 mm 1¼ in	2 screw channels	
6008	52 mm 2 in	32 mm 1¼ in	2 extra thick sides	
6029	60 mm 2¾ in	30 mm 1¼ in	2 screw channels	
6026	60 mm 2¾ in	40 mm 1½ in	1 extra thick side	
6011	70 mm 2¾ in	40 mm 1½ in	1 extra thick side	
6030	80 mm 3¼ in	30 mm 1¼ in	2 screw channels	
6017	93 mm 3⅝ in	43 mm 1⅝ in	1 extra thick side	
6036	100 mm 4 in	15 mm ⅝ in	2 screw channels	
6009	100 mm 4 in	30 mm 1¼ in	1 extra thick side	
6034	105 mm 4⅛ in	53 mm 2 in	2 screw channels	
6031	126 mm 5 in	28 mm 1⅛ in	2 screw channels. Use in decking possible	
6010	128 mm 5 in	53 mm 2 in		
6038	145 mm 5¾ in	22 mm ⅞ in		
6044	174 mm 6⅞ in	87 mm 3½ in		
6033	200 mm 7⅞ in	35 mm 1⅜ in	2 screw channels. Smooth or grooved surface	
6072	200 mm 7⅞ in	50 mm 2 in		
6042	200 mm 7⅞ in	70 mm 2¾ in		
6045	200 mm 7⅞ in	100 mm 4 in		
6041	300 mm 11¾ in	60 mm 2¾ in		
6043	300 mm 11¾ in	75 mm 3 in		
6046	350 mm 13¾ in	110 mm 4¾ in		



PLANEO RANGE

Deck, Louvres, soffit, balustrades.



Planeo	Width (usable)	Thickness	Feature
4010	145 mm 5¾ in	30 mm 1¼ in	Attachment : standard or universal clip 6 mm



VERTIGO RANGE

Façade cladding & siding.

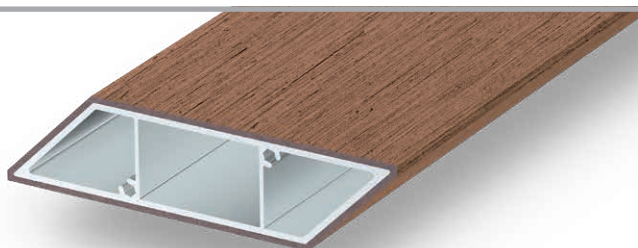


Vertigo	Width (usable)	Thickness
5005	100 mm 4 in	7 mm ¼ in
5011	110 mm 4⅜ in	13 mm ½ in
5010	165 mm 6½ in	13 mm ½ in



DIAMEO RANGE

Louvres, façade cladding, sun shields, screens, bannisters and balustrades.



Diameo	Width (usable)	Thickness	Feature
4018	120 mm 4¾ in	30 mm 1¼ in	2 screw channels
4037	150 mm 5⅞ in	60 mm 2½ in	Polygonal shape 4 sides. 3 screw channels
4022	300 mm 11¾ in	60 mm 2½ in	Polygonal shape. 6 screw channels
4023	300 mm 11¾ in	60 mm 2½ in	Diamond shape





RONDO RANGE

Louvres, façade cladding, sun shields, screens, bannisters, balustrades and handrails.



Rondo	Diametre	Feature	
3002	50 mm 2 in	2 screw channels	
3003	56 mm 2 ³ / ₈ in		
3004	63 mm 2 ¹ / ₂ in	4 screw channels. Can easily be used with a spline	

CAREO RANGE

Louvres, façade cladding, sun shields, screens, bannisters and balustrades.



Careo	Width (usable)	Thickness	Feature	
7015	45 mm 1 ³ / ₄ in	45 mm 1 ³ / ₄ in		
7031	45 mm 1 ³ / ₄ in	45 mm 1 ³ / ₄ in	4 extra thick sides	
7011	53 mm 2 in	53 mm 2 in	4 extra thick sides	
7035	87 mm 3 ¹ / ₂ in	87 mm 3 ¹ / ₂ in	4 extra thick sides	
7014	88 mm 3 ¹ / ₂ in	88 mm 3 ¹ / ₂ in	4 screw channels	
7016	120 mm 4 ³ / ₄ in	120 mm 4 ³ / ₄ in		

ELLIPSO RANGE

Louvres, façade cladding, sun shields, screens, bannisters, balustrades and handrails.



Ellipso	Diametre	Feature	
3000	70 x 110 mm 2 ³ / ₄ in x 4 ¹ / ₂ in	2 screw channels. Can easily be used with a spline	





Ibiza GranHotel



Ibiza Gran Hotel

Ibiza,
Spain

Built : 2018

Type : Soleo 6031 

Colour : Teak

GEOLAMP PREMIUM



Perfection

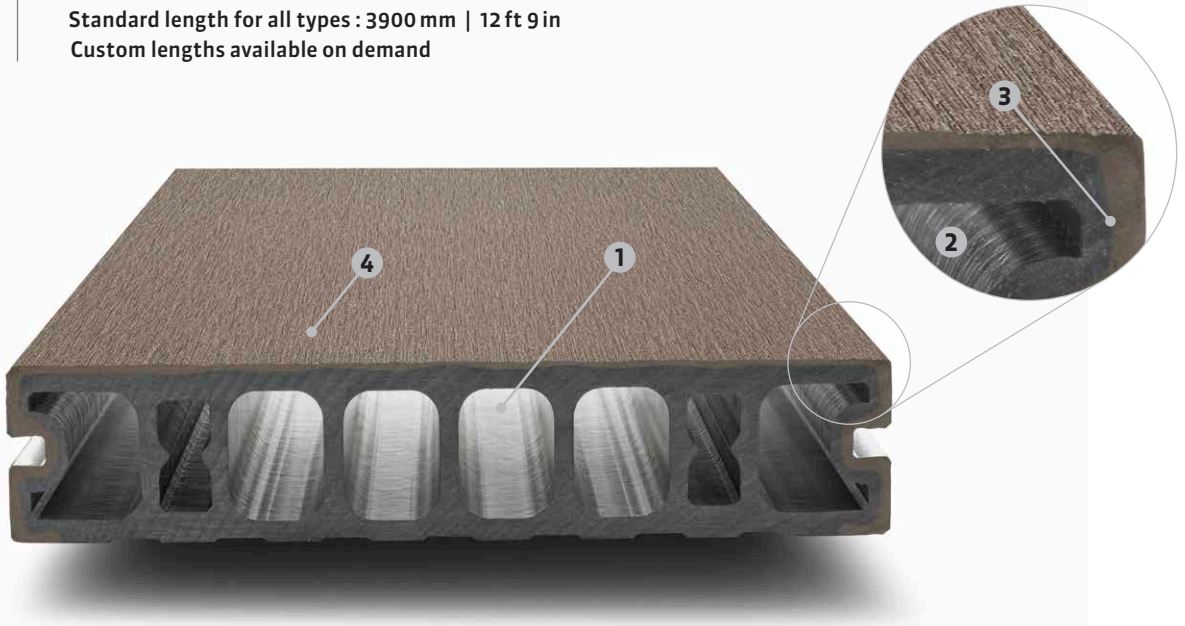
CO-EXTRUDED DOUBLE LAYER TECHNOLOGY

A pioneering spirit, and over 45 years of experience.

Standard length for all types : 3900 mm | 12 ft 9 in
Custom lengths available on demand



Detailed technical specifications as well as build examples on our website.



First generation products were heavy, but in 1992 a revolutionary production method developed by Japanese engineers, led to the manufacture of the world's first hollow cell profiles and their typical honeycomb structure. Hollow cell boards are lighter, more efficient and absorb much less humidity than solid decking products. Their cross sections can be adjusted to permit substantially larger spacing between joists in the substructure, enabling fast installation in all type of construction projects. With a reinforced blade stability, an in between supports axis of 60cm for the structure and the low core humidity absorption, this profile represents the pinnacle of technology in its domain while keeping an economic, fast but high quality installation, compared to first generation co-extruded profiles. The outer skin can be equipped with unique features such as an anti-static surface layer or the thermal shield LowTemp option.

1. HOLLOW CELL TECHNOLOGY

Hollow cell profiles allow implementation at reduced costs due to increase of profiles stability and strength.

2. HIGH-QUALITY EXTRUSION

Polished surfaces are synonymous with high extrusion quality.

3. CO-EXTRUSION

Combining the core and the external layer: the material is homogeneous, which makes it more resistant and more stable.

4. MULTIPLE PURPOSE EXTERIOR LAYER

This WPC layer guarantees an antistatic surface. A thermal shield can be added on demand to lower the surface's temperature when exposed to the sun.



QUALITA PROFILE HIGH PERFORMANCE

A co-extruded board, with anti-static properties and a low co-efficient of expansion designed for public spaces.



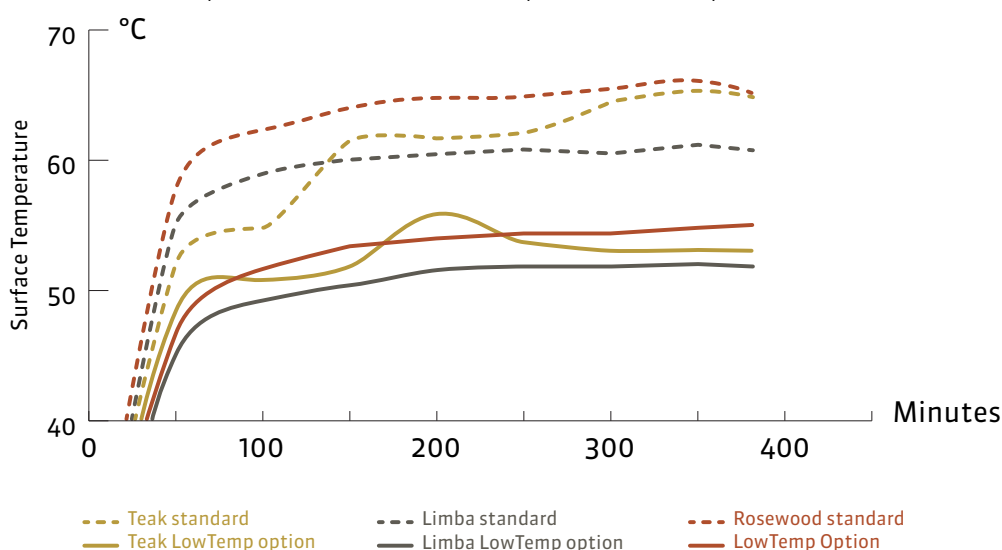
LowTemp Option : Maintains low surface temperatures of the board even under direct intense sunlight (see diagram).

Qualita	Width (usable)	Thickness	Feature
020C	145 mm 5¾ in	30 mm 1¼ in	1 side sanded, usable on one side only. Designed specifically for very humid environment. Anti-static and optional low surface temperature processing.

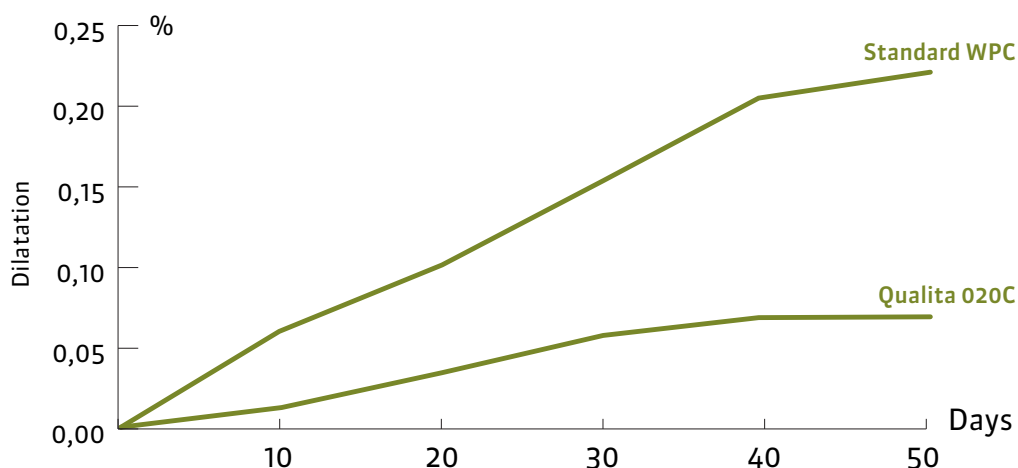


LowTemp option available for Qualita 020C

Complies with surface temperatures as per ASTM4803-97



Expansion due to water absorption





Sturdiness

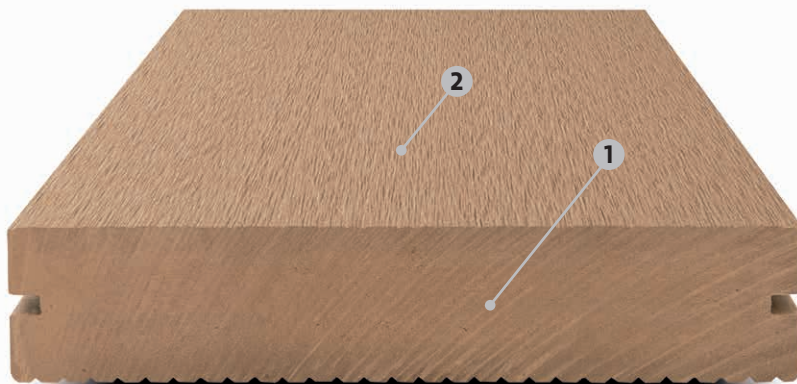
HIGH DENSITY TECHNOLOGY

The advantages from a creative and exclusive technology.

Standard length for all types : 3900 mm | 12 ft 9 in
Custom lengths available on demand



Detailed technical specifications as well as build examples on our website.



Details' perfection. Workable like wood, adapted to particularly heavy loads. Complimentary to the Qualita range.

1. HIGH DENSITY CORE (1300 KG / M3)

2. ANTISTATIC SURFACE

INTEGRA PROFILE

For commercial and public applications.



Integra	Width (usable)	Thickness	Feature
0021	145 mm 5¾ in	30 mm 1¼ in	Works like wood, designed for heavy loads. Complements the Qualita 020C
0022	145 mm 5¾ in	30 mm 1¼ in	Without groove. 1 side sanded, 1 side grooved



COLOURS

Just like tropical hardwood.



Teak



Wenge (Ebony)



Rosewood



Blackwood on demand



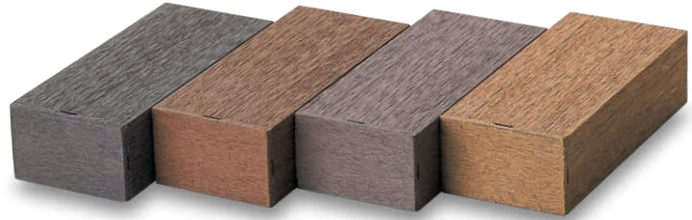
Limba (Moleskin)

ACCESSORIES

Wood hybrid system

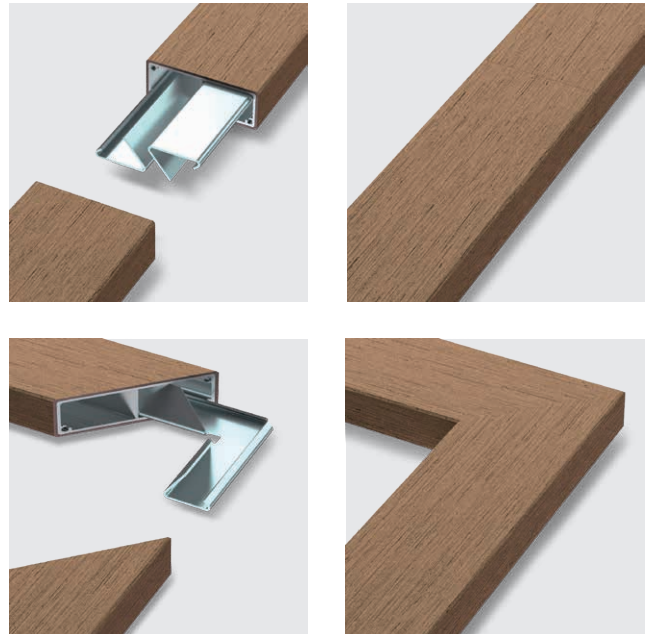
END CAPS

These patented resinous or wood plastic composite end caps cover the end of the profiles, while at the same time allowing moisture to escape. They provide an attractive finish to any installation.



CORNER AND STRAIGHT CONNECTORS

These cleverly designed splices are inserted into the interior of the hybrid profiles. They allow for the assembly of profiles by ensuring proper alignment or to create a perfectly finished 90° angle.



Terrasses and façades

Our Universal fastener, Cliplam®, enhances the value of all of our installations. It is hidden to provide a cleaner surface appearance and adds to the safety and security of each installation by virtue of its perfect fit and hold with our boards. It is corrosion resistant and thanks to its ease of installation provides the most economical fastening whether boards are horizontally or vertically oriented. The Universal clip contains a core of hardened galvanized steel covered with recycled polycarbonate.

Its side flanges marry with the grooves on the side of each board allowing for expansion and contraction of the board during changes of temperature. The Universal clip is installed from the top permitting easy access and fastening of each board to its supporting members.

Clip Universal



End and starting clip



CERTIFICATES

Geolam's success is based on over 250 WPC and WHS patents and quality certificates.



JIS A5741 : a strict environmental standard

Since our Geolam WPC products are made from recycled materials and are themselves recyclable, they comply with the extremely strict JIS A 5741 standard awarded by Japan's national laboratory that classifies recycled composite woods.

This certification guarantees that the product is free from toxic substances. It assesses all the components used, their quality and their performance, as well as the safety and environmental friendliness of the composite wood products.

The classification of our Geolam WPC products:

R90	Made from a minimum of 90 % recycled material
W50	50 % wood
PP	Type of plastic: polypropylene
40	40 % plastic
EX-II	For outdoor use

Eco Mark : a valuable label

Geolam products have been awarded the prestigious Eco Mark Label by the Japanese Environmental Association. This association is a member of the Global Eco Labelling Network, which includes amongst its members the Committee of the European Union, and ECOLOGO and Green Seal in North America.

This award is granted exclusively to products that display a true respect for the planet, guaranteeing amongst other things, absolutely no danger to human health whether installed inside or outside. The entire range of Geolam composite products contains no chlorine, CFC's, PVC's, formaldehyde glues or solvents.



Important fire control certificates for Geolam's Wood Hybrid Systems

Fire rating of Geolam wood/hybrid boards – available upon request

Europe	Euroclasses (EN 13823+A1) : B-s3 d0, C-s3 d0 or D-s3 d0
France	(NF P92-507) : M1 to M3
Germany	(DIN 4102-1) : B2 classification
Belgium	(NF P92-501) : A1 classification

Other tests

Colour stability, ultra-violet testing and weather ageing tests	<ul style="list-style-type: none"> • Norme JIS-K1571-2010 : Delta E de 2.53 after 5 000 hours of exposure • Norme JIS A 1415 : Delta E de 2.1 after 5 000 hours of exposure • Norme DIN EN ISO 11341 : Delta E de 1.9 after 1 000 hours of exposure (differential method) • Norme DIN EN ISO 16474-2 : Delta E de 2.4 after 1 000 hours of exposure
Resistance to sulfur dioxide	• Norme DIN EN ISO 3231 : no change in appearance after 24 cycles
Salt resistance	• Norme DIN EN ISO 9227 NSS : no change after 240 hours
Brinell hardness	<ul style="list-style-type: none"> • Norme JIS Z 21010-1994 : 26.8 in the middle of the cells and 52.3 above the cells separation • Hardness superior to that of Teak (24.5) according to the same referential
Resistance to Abrasion	<ul style="list-style-type: none"> • Norme JAS Flooring A : loss of 0.068 g for 1kg charge and 500 rotations • Hybrid Woods (WHS) outclass Composites (WPC)
Carbon footprint	<ul style="list-style-type: none"> • 1.54 kg - CO2 per kg of WPC • 9.005 kg – CO2 per kg of WHS (Soleo 6008)

SERVICES

Geolam provides technical consulting to support planners in the design, presentation and tendering process.

DURING THE PRESENTATION

- Sales pitch
- Photos of installations
- Samples: boards, colours
- Calculation help
- Certificates: Environmental certificate, quality certificate, ISO certificate, fire rating certificate.

DURING THE DESIGN PHASE

- Advice in selecting the right products
- Site visits
- Review of drawings / CAD data
- Technical support

DURING THE INSTALLATION PHASE

- Just in time delivery
- Distribution of information among project stakeholders
- Installation guides
- Technical advice at each phase of the installation, installation engineering.
- Monitoring and control of job sites
- Technical assistance
- Advice in upkeep & minimize on-site loss and damage

NON-DEPRECIABLE WARRANTY

- Boards, 10 years
- Fasteners, 25 years





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YouTube



More work
on our website

Geolam[®]

Architectural Eco-Technology

GEOLAM AG

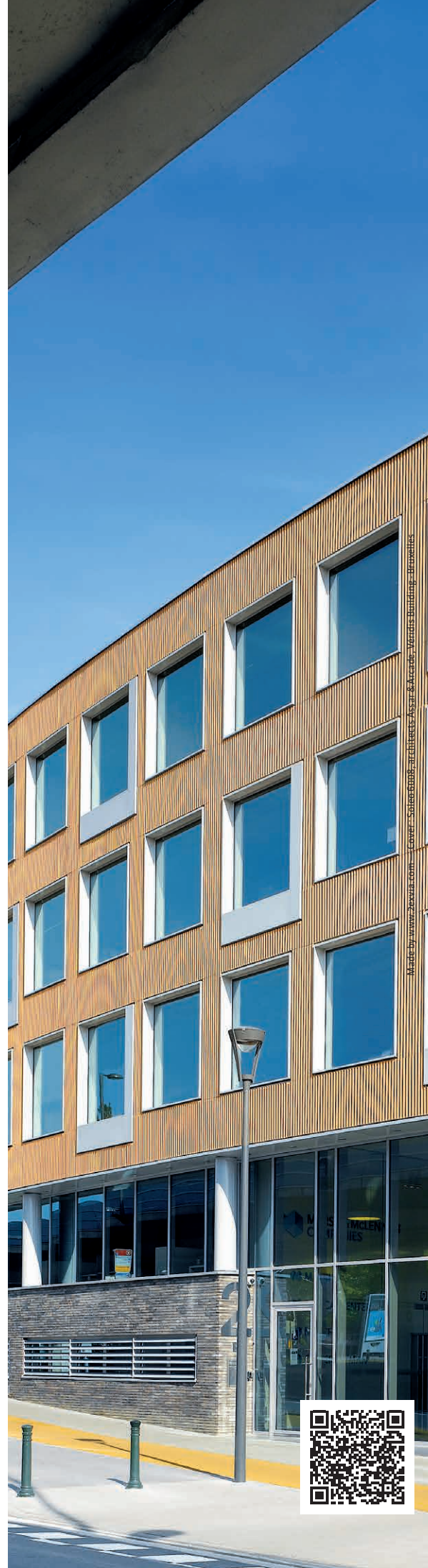
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