

Accoya[®] wood cladding & joinery guide with Teknos coatings

accoya[®]

TEKNOS



Innovation in wood

Accoya® wood is created from readily available sustainably sourced non-durable woods that are modified to match or exceed the durability, stability and beauty of the very best tropical hardwoods. The Accoya® wood production process that 'enables nature', creates a new durable, stable and beautiful product - that has the very best environmental credentials.

A new world of high performance, sustainable, low maintenance products - including windows, doors, decking, cladding and glulam structural beams - is opened up by Accoya® wood. The exceptional properties of durability, stability, strength and beauty have even led to Accoya® wood being used as the main construction material in a heavy traffic road bridge with a highly original design.

Accoya® is helping to protect the world's precious hardwood resources and is guaranteed for 50 years in exterior use and 25 years when used in the ground. This long life also provides an added benefit - helping to reduce carbon emissions by delaying the point at which wood breaks back down again into CO₂ and its other base components.

Accoya® wood creates beautiful and sustainable possibilities, even in demanding applications.



Teknos is one of Europe's leading suppliers of industrial coatings with a strong position in retail and architectural coatings too.

Over the past seven decades they have expanded their presence to over twenty countries, employing more than 1,200 people. They offer a wide range of high quality paints and coatings for the manufacturing industry, building professionals and consumers.

Established in the UK since 1991, Teknos provides technical support, sales and delivery services throughout the UK and Ireland from its three service centres in Swerford near Banbury (England), Livingston (Scotland) and Magherafelt (Ireland).

Teknos' strengths lie in its strong commitment to the environment, sustained investment in R&D and its long established partnerships with most of the leading manufacturers and suppliers in the European industrial wood market. They carefully select the best and most appropriate products from their extensive group portfolio to ensure their coatings offer optimum performance for the UK market, with minimal impact on the environment.



Independent accreditation

Teknos's Total Factory Applied Protection Systems comply with the requirements of BS EN 927, BS EN 644 and BS EN 599, the European Standards for factory finished preservative treated timber, and with the leaching and ageing resistance requirements determined by EN 84 and EN 73.

The full system is certified by RAL Gütegemeinschaft 821/817; IFT Rosenheim (535 25424); and by the Danish Technological Institute (358-02/2004).

Independent testing by the UK Building Research Establishment (BRE 225-386) has shown the system to outperform traditional approaches by inhibiting rot, mould and moisture ingress, leading to its acceptance by the UK National House Building Council (NHBC).

Extended UK coating performance warranty

Coating maintenance periods are extended with Accoya®. The Teknos joinery range of factory applied coating systems are now available with 10 year and 12 year warranties on fully factory finished translucent and opaque coatings respectively.

The Teknos warranty is available on exterior joinery manufactured from Accoya® wood and covers embrittlement, flaking or cracking of the coating system as a result of a coating manufacturing fault.



Quality and our environment

Teknos, and its joinery manufacturing partners, share a commitment to quality and to meeting and exceeding best practice.

All Teknos's factories have quality and environmental management systems, certified in accordance with ISO 9001 and ISO 14001 and our Industrial Wood plant in Vamdrup also holds an EMAS certificate.

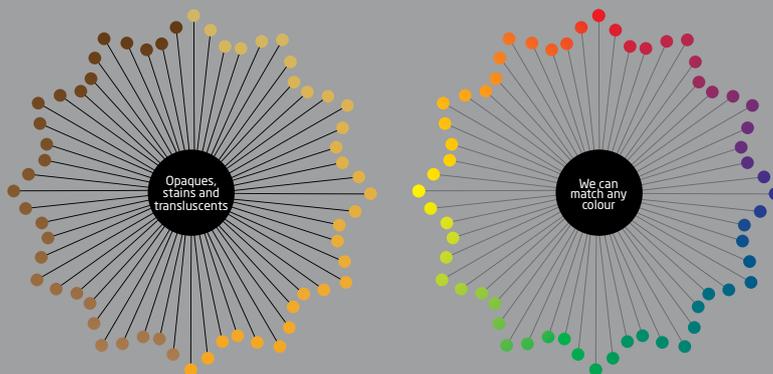
All Teknos joinery coatings are water based, free of heavy metal additives, and with VOC levels below current and proposed legislative levels.

Key products and coating systems

The Teknos joinery range of factory applied coatings are designed to protect and decorate a wide range of exterior and interior joinery components and claddings.

Available in an almost unlimited range of opaque colours, translucent stains and semi transparent shades.

Suitable for factory application by coating machine, automatic and manual spray and for brush applied maintenance.



Product type	Product Name	Description	Application	Colour range	Key features
Preservative	Teknol Aqua 1410	Preservative meeting use class 3: BS EN 335-1 and the performance requirements of BS EN 599-1	Dip, Flow or Vacuum coater	Colourless	HSE registered NHBC and BRE Approved Protects against blue stain and wood degrading fungi
Combi preservative/ primer	Aqua Primer 2907	Combination preservative primer meeting use class 3: BS EN 335-1 and the performance requirements of BS EN 599-1	Dip, Flow or Vacuum coater	Selected range	HSE registered Resistant to wood destroying fungi and mould
Base stain	Aqua Primer 2900	Translucent basecoat	Dip, Flow or Vacuum coater	Teknos Parkland and Lodge colours	Equalises surface colour Increases UV stability of timber substrate
Isolating primer	Anti stain Aqua 2901	Inhibits staining from natural tannins	Dip, Flow, Vacuum coater or airless spray	Antique white and grey	Primer and/or mid coat application High film build Excellent sanding properties
External topcoat	Aquatop 2600	External microporous topcoat for cladding and joinery components. Available in wide range of translucent and opaque colours	Vacuum coater or airless spray	White, RAL, BS, NCS, Parkland, Forest Inspirations and Lodge colours	Non blocking formulation Mould resistant Meets Class 3: BS 476 Part 7
Ancillary products	Teknoseal 4000	End grain sealer on exterior joinery and cladding	Brush	Clear	Minimises moisture vulnerability of exposed end grain
	Teknos V Joint Sealer	Flexible, water based, construction joint sealer	Cartridge gun	Clear	Minimises moisture ingress at joints
	Teknofill 5001	Fine surface filler for use with opaque coatings	Spatula	White	

Best practice tips on coating Accoya®

End seal

All exposed end grain on cladding boards and joinery sections should be coated with an effective end seal such as Teknoseal 4000

Rounded corners

All Accoya® cladding boards and joinery sections should be rounded with 3mm radius corners

Mouldicide

Since Accoya® is non-toxic it is susceptible to blue stain, so primer should incorporate an effective mouldicide

Darker translucent colours

Can provide longer maintenance intervals than lighter shades

Four sides coated

Cladding boards should be coated on all four sides for superior performance

Stainless steel fixings

High quality stainless steel fixings are recommended with Accoya®

For more information please refer to the Accoya® Wood Information Guide.



Accoya® coating performance

Tests show coated Accoya® cladding maintains its appearance up to three times longer than standard cladding boards...extending maintenance cycles and reducing costs

Accoya®'s features and benefits



DIMENSIONALLY STABLE



OUTSTANDING DURABILITY



PERFECT FOR COATING



NATURALLY INSULATING



BAREFOOT FRIENDLY



INSECT BARRIER



EXCELLENT MACHINABILITY



NATURALLY BEAUTIFUL WOOD



CONSISTENT QUALITY THROUGHOUT



FROM SUSTAINABLE SOURCES



RETAINED STRENGTH & HARDNESS



NON-TOXIC & RECYCLABLE

CASE STUDIES



Glasshouse Conservatories

This distinctive conservatory, located in Preston, north west of England, is manufactured from Accoya® and coated with a Teknos fully factory opaque coating by premium manufacturer Glasshouse Conservatories.

The company has been manufacturing these prestigious products for the past eight years, historically using `Sapele hardwood` as the main timber species. But continued research and development has led them to use Accoya® wood for its durability, sustainability and practicality.





Glasshouse Conservatories

More and more customers are aware of the sustainability and environmental issues associated with the use of tropical hardwoods and are looking for an alternative. Accoya® wood offers the perfect solution.

Even the use of engineered hardwood for joinery production, whilst addressing the movement problems associated with timber, does not address green credentials. Accoya® wood solves both these issues.



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CASE STUDIES

Belle Tout Lighthouse

The iconic 177 year old Belle Tout Lighthouse which sits high on the cliffs above the sea at Beachy Head, Eastbourne, Sussex (UK), was purchased by private owner David Shaw in 2008. David immediately set about an extensive renovation programme to convert the historic building into an exclusive and unique guesthouse.

With the exception of the metal windows around the top of the tower where the lamp was once housed, the remaining existing windows were of timber construction in a mixture of styles and timber species and were generally in very poor condition, letting in both wind and rain; they were also inefficient in terms of energy conservation as they were mainly single glazed.





Belle Tout Lighthouse

Following discussions with the Local Authority Planning & Conservation Department, Mr Shaw decided to replace all of the windows. Bearing in mind the age and location of the building, the local Conservation Officer expressed a preference for the replacement windows to be timber. Mr Shaw was keen to commission a UK based manufacturer, ideally local to Sussex.

Accoya® wood windows with a Teknos coating was the ideal solution for Mr Shaw in this extreme environment.

A recent review 2.5 years after the window and door installation showed there was no signs of rot or decay or coating degradation in this ever-changing tough climate.

CASE STUDIES



Bellway Homes

Window and door specialist, Dempsey Dyer, turned to Accoya® wood and a Teknos coating in 2008 for the doorsets and window sashes of 19 townhouses constructed by Bellway Homes in Purfleet, Essex, UK.

One of the key reasons for choosing Accoya® was that the wood was to be coated with a challenging black finish (dark coatings readily absorb sunlight) and stability was therefore critical.

The townhouses include five metre high single and double door screens. A recent review of these stunning homes in 2012 found that the Accoya® wood used was still looking superb with excellent colour retention and no signs of rot or decay.



CASE STUDIES



NHS Victoria Hospital

The Victoria Hospital, Deal, looked to Accoya® wood for replacement sliding sash windows in the summer of 2008. The windows replaced a combination of wooden and UPVC windows.

In Phase I, 103 sash windows were replaced, using approximately 25m³ of Accoya® wood, finished with an opaque white Teknos coating. During a 2.5 year inspection of the project the windows show no sign of rot, decay or coating degradation.





NHS Victoria Hospital

The National Health Service was so impressed with the results and with the performance of Accoya® wood that they have commissioned a further 91 Accoya® sash windows with a Teknos coating supplied by Dempsey Dyer for the second phase, replacing PVC windows.



INDIAN CASE STUDIES



Introduction

The extremes of India's diverse climate conditions including high temperature and monsoons are being overcome by the use of Accoya® wood.

Accoya® used in a sound insulated apartment

An upscale south Mumbai apartment needed replacement of its existing wood windows while trying to minimise the high-pitched morning and afternoon noise from the school next door.

Originally thinking of installing uPVC windows, the client was 'floored' by the rich finish of RitikaalWood products using Accoya® and how they complemented the refined and premium, furnishings of the rest of their home. The solution of double glazed acoustic glass panes mounted on coated casement wood frames, using a combination of sliding and casement windows at different locations, provided adequate ventilation, light, and ease of cleaning, whilst drastically improving the sound insulation by 30-32 dB.





Accoya® wood used for Panvel farmhouse

Stability and durability were the prominent factors for this high class Indian investor looking for a timber material for doors, windows, and a curtain wall façade for his weekend farmhouse. The 465 sq meters residence is located in Panvel in the state of Maharashtra. The build is spread across four acres of land, situated on the banks of the Gadhi River; it consists of four bedrooms, a large entertaining area and a swimming pool.

The climate in this area of India is tropical with heavy winds during monsoon seasons. The timber used for construction projects situated in such varying weather conditions have to be exceptionally durable and stable. For these reasons, Accoya® wood (supplied by RitikaalWood) was used. In total, over 150 sq meters of Accoya® wood was used for 20 coated windows, louvres and walls.

All of the timber elements, including the sliding windows and doors on two floors, were pre-engineered and fixed within a matter of hours in order to avoid the difficult monsoon weather.

Accoya® wood is not only extremely durable and stable, but also sustainable, and complements the natural surroundings of the farmhouse. Its dimensional stability only adds to the benefits of the timber constructions in such a tropical environment.

All these projects used Teknos Aqua Primer 2907 and Aquatop 2600 External Topcoat.

INDIAN CASE STUDIES



Accoya® wood for new unique private residence

Accoya® wood has been used in the renovation of a private Indian residence.

The owners of the property, located in Central Pune, the eighth largest metropolis in India, required windows and doors for their modern three-storey suburban bungalow. The residence needed a premium and unique look to complement the other wood and luxury interior furnishings.

The renovation consisted of a two-track sliding door and a combination of two and four shutter windows with casement frames. With the Indian climate so prone to change, any material used must be up to the challenge of facing varying and extreme weather. Accoya® wood was the answer.

Beautiful commercial building made with Accoya®

One of the largest developers in Pune, India's sixth largest city, was looking to make a striking impact for their brand new commercial property headquarters.

The architect, one of the most well respected in India, was looking for a unique material to compliment this signature project for the owner. Accoya® wood with a fully factory finished coating was the answer.



All these projects used
Teknos Aqua Primer 2907 and
Aquatop 2600 External Topcoat.

13-year window L-joint test - BRE

The BRE (Building Research Establishment) is an independent institute based in Watford, UK. In durability field testing to European Norm (EN) 330:1993 - which parallels America Wood-Preservers' Association (AWPA) E9 - simple mortice and tenon joints (L-joints) are assembled, coated and placed outside, with the coating over the joint deliberately broken to allow typical water ingress. This test represents a worst case scenario for joinery products and requires the coated wood to be exposed to normal environmental factors.

In February 1998, L-joints were installed at the BRE Garston field exposure site (Watford, UK) facing the prevailing south westerly weather on an elevated test rig. The test remains in progress with inspections at regular intervals. The BRE reported: "In simulated accelerated joinery field trials that represent a worst case scenario joinery product by enabling moisture ingress into the joint pine, sapwood wood L-joints acetylated to a slightly lower modification level than Accoya®, after 13 years exposure in the UK are performing very well. The trial indicates that a permeable timber species that is acetylated through the cross section to a durability class 1 level (e.g. Accoya®), would have a grading lower than the reference preservative TnBTO - and thus Accoya® would exceed (the performance of) the biological reference value and would be deemed to provide sufficient protection for long life window joinery."



Non-acetylated wood showing severe rot & decay



Accoya® wood showing no rot or decay

42-month external coatings test - TRADA



Leading timber research institute, TRADA, was commissioned by Accsys Technologies to provide an update on a series of exposure trials.

The ongoing trials using the same coating began in February 2007 in Buckinghamshire, England and tested Accoya® cladding board's resistance to natural weathering and splitting in comparison to pine and Siberian larch.

After 42-months, Accoya® wood was found to outperform the competing cladding boards in a number of ways - showing excellent coating performance. Pine cladding boards showed severe levels of fissuring, resin exudation, end fissuring, paint peeling over fissures, shelling, surface checking and board distortion; whilst Siberian larch was found to have extensive surface checking and burst resin pockets.

Accoya® wood, however, had a flat cladding surface with no grain raising, virtually no shelling, cracking, checking or fissuring. External dirt was easily cleaned off revealing a sound clean surface with no rot, decay or coating issues. This harsh test proves that Accoya® wood has superior coating performance compared to many competing materials.



Siberian Larch cladding



Pine cladding



Accoya® wood cladding



9.5-year external coatings test - SHR

Independent testing institute SHR Timber Research in The Netherlands conducted a comprehensive coatings test on Accoya® and untreated wood with opaque paints and stains.

Accoya® wood outperformed all other timbers, with better coating performance and superior coating adhesion in both wet and dry conditions. The white opaque performed extremely well, requiring no maintenance after 9.5 years - which is an important benefit in the long-term life cost of the product and ensures that Accoya® has a superior whole life cost compared to competing materials.



7-year coating test at Teknos - BM TRADA



A weathering test was set up by Teknos (UK) Ltd, a leading coating supplier to the factory applied window, door and cladding industry across Europe. The test began in March 2009 to obtain natural weathering performance data, end grain sealing and profile design impact of three different timber substrates (coated) and on different cladding profiles. Apart from Accoya®, Western red cedar (WRC) and Siberian larch were included in the test rig.

After 7 years of natural exposure, the Accoya® boards have exhibited the best performance and have shown excellent stability, which has served to significantly reduce splitting and fissuring at board ends, prevented distortion and fissuring around fixings as well as extending the expected lifetime of the coating.

Coated boards made from Western red cedar and Siberian larch are now in need of immediate maintenance whereas the Accoya® boards are yet to show any significant deleterious effects of weathering after five years and suggests this is likely to be an important factor in the overall reduction of maintenance frequency and costs.



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