tricoya®

www.tricoya.com

A NEW BREED OF MDF

An extremely durable and stable wood panel

GARAGE DOOR
United States

IMAGINE HAVING AN MDF PANEL TRULY DURABLE AND STABLE ENOUGH FOR USE OUTSIDE. WITH AND WITHOUT COATINGS IT WOULD ENABLE SIMPLE MANUFACTURING AND USE IN APPLICATIONS NOT PREVIOUSLY CONTEMPLATED FOR MDF. IMAGINE TRICOYA®. A NEW BREED OF MDF.

tricoya®

CLIMBING WALL
The Netherlands

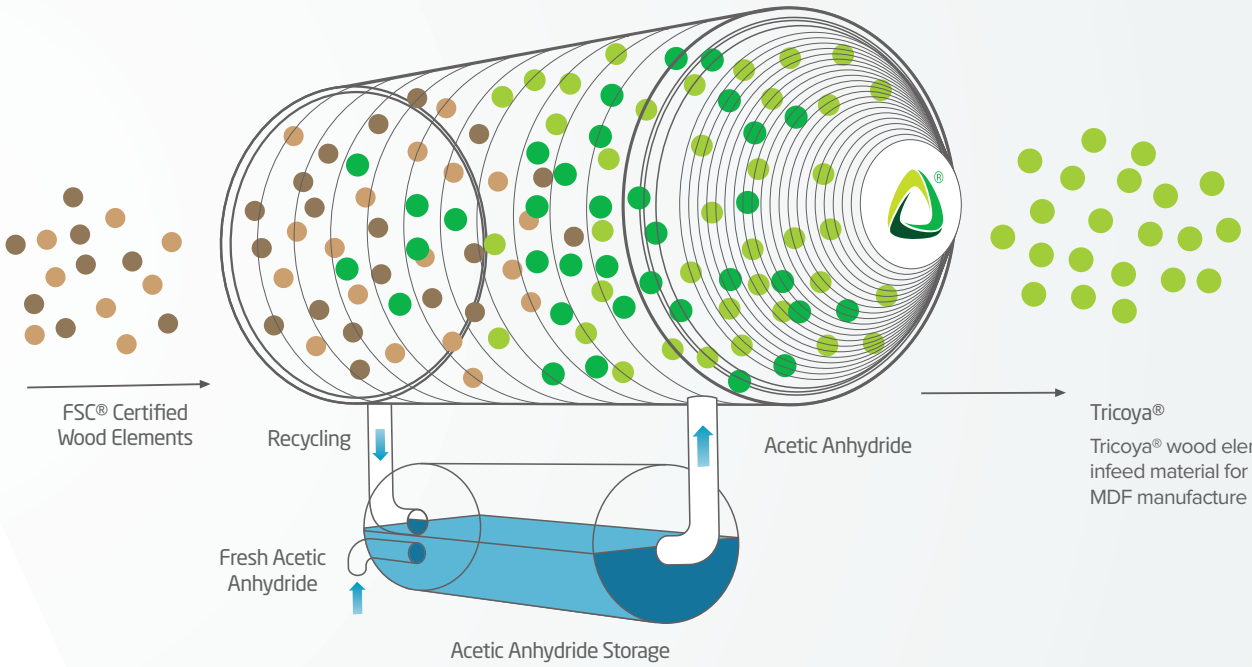
SHOPFRONT PANELING
Germany

ABOUT THE PANEL

Tricoya® is a completely new, high performance MDF panel product. It demonstrates outstanding durability and dimensional stability in the most extreme and challenging environments – both exterior as well as interior, wet and high moisture applications. The product uses proprietary acetylated wood technology and a modified MDF manufacturing process to create a wood panel product with outstanding durability and stability.

Tricoya® was developed by challenging the most fundamental reason for wood swelling: water absorption onto hygroscopic wood fibers due to the presence of hydroxyl groups. The hydroxyl groups (water loving sites) can bind or release water molecules causing wood to swell or shrink.

Acetylation is a revolutionary sustainable process which has been proven on Accoya® solid wood since 2007, and increases the number of naturally occurring hydrophobic acetyl groups in the wood cells using acetic anhydride. The process exchanges the hydroxyl groups (chemical formula: -OH) with acetyl groups (chemical formula: $-COCH_3$) preventing water absorption at these sites, and thus enhancing the dimensional stability and durability of the wood.



Apart from creating exceptional dimensional stability, the process enables Tricoya® to achieve class 1 durability, leading to resistance of biological decay which exceeds oak and tropical wood species including Burmese teak in extended in-ground graveyard trials in accordance with AWPA E7 methods.

Tricoya® offers a solution for specifiers and consumers in environments of wet, high humidity or fully weather exposed applications to deliver superior performance in a versatile large panel form.

Tricoya® wood fibers are blended at the MDF mill with zero formaldehyde resin to produce a no Added formaldehyde finished product.

TRICOYA® PANEL BENEFITS

DURABLE

Longer lasting, perfect for outdoor use or wet (interior and exterior) environments

DESIGN FREEDOM

All the design, machining and assembly flexibility of medium density fiberboard

FUNGAL RESISTANCE

Effective barrier to fungal decay

50 YEAR WARRANTY

Peace of mind with a 50 year Tricoya® warranty above ground and 25 years in ground

LOWER MAINTENANCE COSTS

Extended periods between exterior coatings maintenance

DIMENSIONALLY STABLE

Swelling and shrinking dramatically reduced

IDEAL FOR COATING

Improved stability and durability enhances the service life of the coating. Damaged coating will not affect the panel warranty

NO ADDED FORMALDEHYDE

Tricoya® complies with CARB 93120 for Phase 2 and NAF requirements

SUSTAINABLY SOURCED

Sustainably sourced FSC® certified

FSC
www.fsc.org
FSC® C012330
The mark of responsible forestry

PROPERTIES

Tricoya® creates a new class of wood based panel products with class 1 durability and exceptional dimensional stability, suitable for a wide range of exterior applications such as doors siding, façade paneling, trim, fascias, soffits, etc. Tricoya® can be cut, machined and installed using techniques and equipment commonly used throughout the building industry and requires low maintenance thereafter. The flexibility of Tricoya® offers endless design opportunities so that it can be cut to size, machined CNC cut, painted, routed, wrapped without impacting its unique properties.

Moisture content
Tricoya® is supplied with a moisture content of between 3% - 5%. An indicative measurement of the moisture content should be made before installation. If a measurement shows a moisture content of 8% or more, this may indicate the presence of "free water" and the Tricoya® should be allowed to dry before processing, gluing or coating. Tricoya siding should be installed with a ventilated cavity.

Reports and certificates
Timber Products Inspection, Georgia USA have completed in-ground graveyard tests (AWPA E7) on uncoated Tricoya® for 32 months in the Ground at their Gainesville Florida Site. Tricoya® showed no degradation at the 32 month inspection period while initial decay and termite attack were evident in Burmese teak and both Sapele and Western Red cedar were heavily attacked.

Building Research Establishment (BRE) UK and AFRC Australia performance testing indicates that Tricoya® achieves durability class 1 under EN 350-2. Durability is at least equivalent to Burmese teak and more durable than oak.

British Board of Agrément (BBA) assessment concludes that Tricoya® is suitable for internal and external non-structural applications (BBA Assessment number M2/49109).

Fire behavior
Tests, according to ASTM E84 (surface burning characteristics), have shown that Tricoya® performs in line with other solid wood species and MDF and Class C.

PROPERTY	TEST METHOD	TRICOYA®	REQUIREMENTS FOR CPA'S ENGINEERED WOOD SIDING
Density	ASTM D1037- ANSI A135.6	44 to 47 pcf	NA
Water absorption	ASTM D1037- ANSI A135.6	<7.0%	12% Max
Thickness swell	ASTM D1037- ANSI A135.6	<2.0%	8% Max
Weatherability	ANSI A135.6	<0.7%	17% Max ax
Linear expansion	ASTM D1037- ANSI A135.6	<0.13%	0.35% Max
Nail head pull through	ASTM D1037- ANSI A135.6	>350 lbf	150 lbf Min
Lateral Nail Resistance	ASTM D1037- ANSI A135.6	>325 lbf	150 lbf Min
MOR	ASTM D1037- ANSI A135.6	>3,250 psi	1,800 psi Min
MOE	ASTM D1037- ANSI A135.6	>425,000 psi	NA
Hardness	ASTM D1037- ANSI A135.6	>1,000 lbf	450 lbf Min
Moisture Content at 70oF / 65% r.h.	ASTM D4442- ANSI A135.6	3 to 5%	4 - 9%
Thermal Conductivity	ASTM C177	0.103 W/m-K	NA

TRICOYA FACADES
Chile

PERFORMANCE COMES NATURALLY

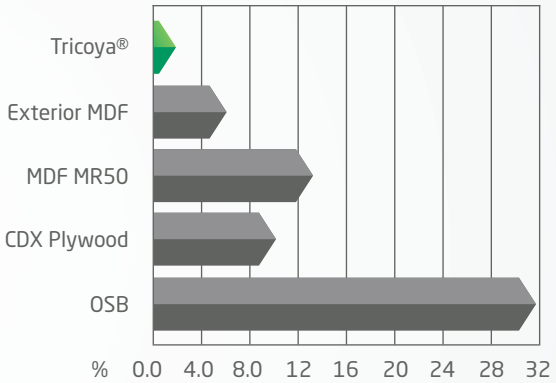
Many of the benefits observed in Accoya® solid acetylated wood, including enhanced dimensional stability, durability and fungal resistance, hold true for Tricoya®.

The functionality and versatility of wood-based composite panels give them universal appeal. Up until this point, the suitability of MDF panels for exterior and indoor constant wet use environments has been limited and over laid with practical limitations.

Tricoya® combines the versatility, ease of machining, ease of coating and large panel format with the performance heritage and credentials of Accoya®. Accoya® and Tricoya® and are living up to the promise for manufacturers and specifiers alike.

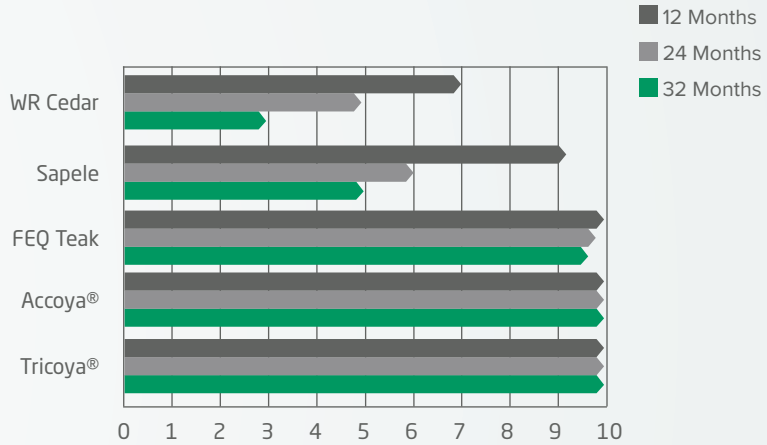
We encourage you to take a Tricoya® sample, cut it, drill it, soak it and bury it. The panel performs.

Thickness Swelling



Water soaked for 24 hours

Decay Resistance



0 to 10 rating, with 10 being the best
E7 Stake trials, TPI test site, Gainesville Florida. Uncoated.

TPI 3RD PARTY E7 TEST SITE
Gainesville Florida USA

ENTRANCE DOOR PANELS,
London UK

APPLICATIONS

- Window and door components
- Door skins
- Trim
- Façade cladding/siding
- Fascia/soffit panels and other secondary exterior applications
- Wet interiors, including wall linings in swimming pools, bathrooms, changing rooms etc
- Outdoor kitchens
- Signage
- Specialty furniture including lockers, cubicles, chairs & tables
- Play frames, tree houses & exterior composite furniture
- Sound barriers
- And much more...

THE FINISHED ARTICLE

Tricoya® can be cut, coated, sanded, glued, machined and fastened the same as any other high performing wood fiberboard – allowing users all the freedom associated with MDF. The Tricoya® difference is that this can now be done for the outside and with confidence.

Supply
Tricoya is produced in the following standard panel sizes*

6mm 0.236" x 4' x 8' & 10' & 12'
9mm 0.354" x 4' x 8' & 10' & 12'
12mm 0.472" x 4' x 8' & 10' & 12'
15mm 0.591" x 4' x 8' & 10' & 12'
18mm 0.709" x 4' x 8' & 10' & 12'

Other sizes may be produced upon request and typically associated with a minimum order quantity. Potential panel size is governed by the 8' press width and longitudinal options of 5' to 18' subject to mill confirmation and container loading options.

Custom thicknesses between 5mm, 0.197" and 18mm, 0.709" can be produced subject to mill confirmation for quantities of at least one container.

Machining and Finishing
Tricoya® may be cut, machined and used in exactly the same way as other wood fiberboards with no change in machinability. Tricoya® is delivered with a 120 grit sanded finish. It may be sanded with finer papers to achieve smoother surfaces. Water based paint systems may be used to decorate Tricoya®. Tricoya® may be laminated with melamine papers, high pressure laminates, wood veneers, foils and other materials. Exterior adhesives such as epoxy, polyurethane, phenol-resorcinol resin and EPI may be used as long as they meet exterior use requirements via ASTM D5751 Wet Use, or other equivalent test method.

All mechanical fasteners that may come into contact with water, including screws, hinges, fixtures and fittings, should be manufactured from Stainless Steel ANSI type 304 or 316. Internal handles and other furniture that are used in dry conditions may be made from any usually acceptable material. Components used for furniture and other interior applications that are normally installed in dry conditions may utilze galvanized, coated and other metals with low corrosion resistance.

Corrosion testing on naval brass and higher quality aluminum products show that these metals are highly corrosion resistant in direct contact with Tricoya® and may also be considered.

There are many aluminum alloy types. By way of example the following aluminium grades performed well in internal testing: 3003, 6005, 6063, 6061, 5154, 5052, 3052 and 1100.

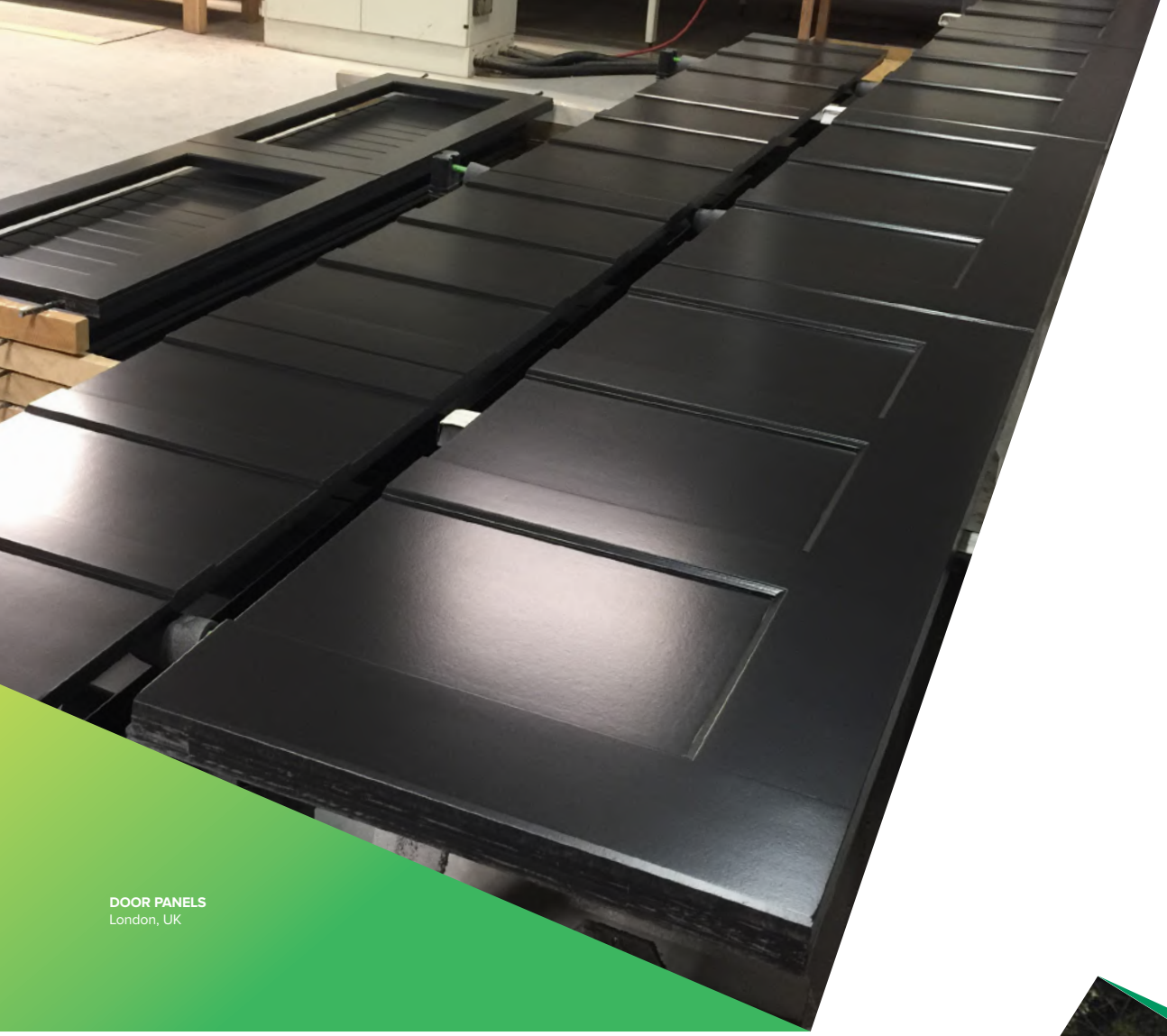
Fire Rating
Tricoya® is classified as meeting a Class C flame spread rating by the ASTM E84 method.

Insect Resistant
Tricoya® has termite resistance meeting UC4A ground contact requirements and performs better than heartwood from western red cedar and Burmese teak.

See page 7 for full technical property information.

Training
Accsys runs a manufacturer training program. For more details please contact sales@accoya.com

*Dimensions are close approximations based on conversion from metric.



DOOR PANELS
London, UK

TRICOYA TECHNOLOGIES

FSC www.fsc.org FSC® C012330
The mark of responsible forestry

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