

# EXTERIOR DURABLE FIBREBOARD

[www.tricoya.com](http://www.tricoya.com)



tricoya   
EXDF



916.258.3212  
[www.trinityinnovations.net](http://www.trinityinnovations.net)

These guidelines have been written for professionals wishing to use Tricoya® ExDF to create beautiful, reliable and highly durable end products.

[www.tricoya.com](http://www.tricoya.com)

For more information please contact your sales representative. Other brochures and information sheets on processing and fixing systems can also be found in the download section of [www.tricoya.com](http://www.tricoya.com)

IMAGINE A WORLD OF  
NEW AND EXCITING  
POSSIBILITIES FOR  
A WOOD BASED  
PANEL PRODUCT,  
ENABLING ITS USE IN  
APPLICATIONS AND  
ENVIRONMENTS THAT  
COULD NOT PREVIOUSLY  
BE CONTEMPLATED.  
IMAGINE TRICOYA EXDF.



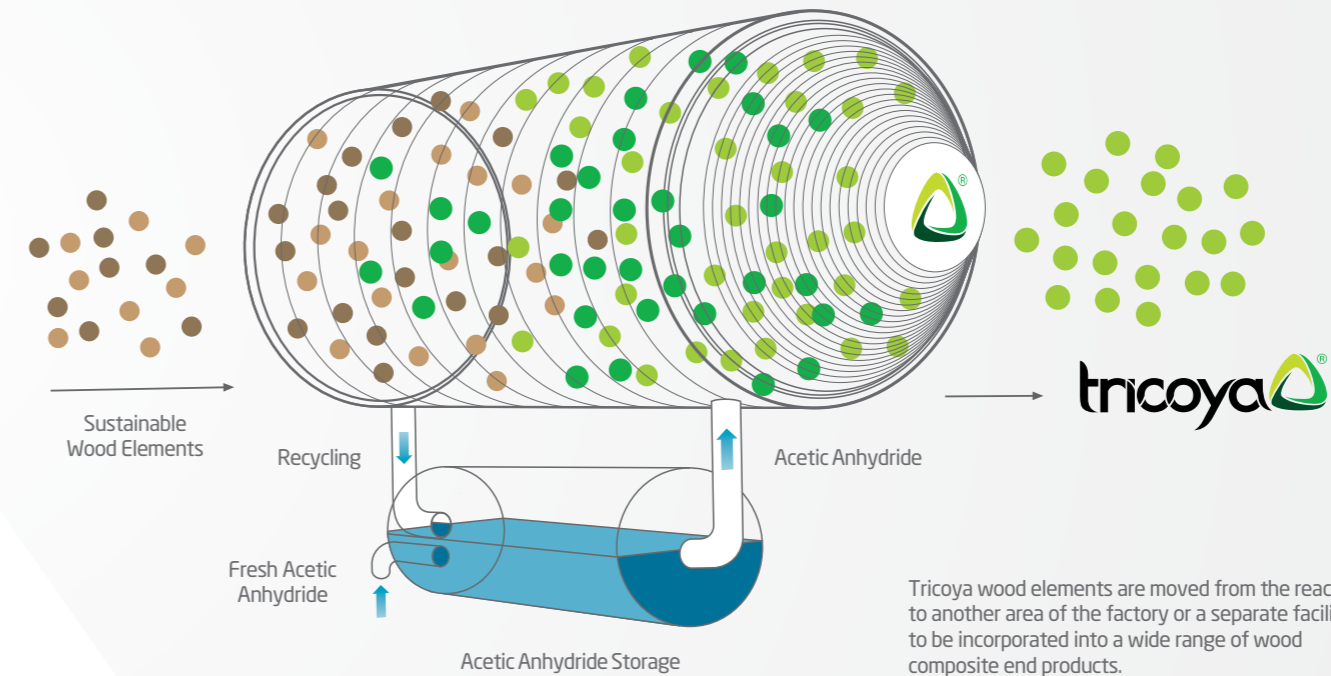


# ABOUT THE PANEL

Tricoya ExDF is a completely new, high performance, wood based 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 fibreboard manufacturing process to create a wood panel product with outstanding durability and stability.

Tricoya ExDF was developed by challenging the most fundamental reason for wood swelling: water absorption onto hygroscopic wood fibres 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.

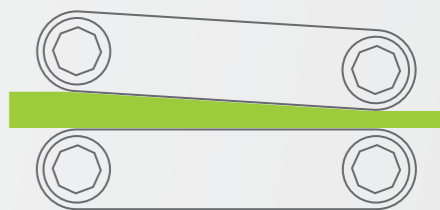
Acetylation is a revolutionary sustainable process which increases the number of naturally occurring hydrophobic acetyl groups in the wood cells using acetic anhydride. The process exchanges the hydroxyl groups (chemical formula: -OH) with acetyl groups (chemical formula: -COCH<sub>3</sub>) preventing water absorption at these sites, and thus enhancing the dimensional stability and durability of the wood.



Tricoya wood elements are moved from the reactor to another area of the factory or a separate facility to be incorporated into a wide range of wood composite end products.

Apart from creating exceptional dimensional stability, the process enables Tricoya ExDF to achieve class 1 durability, leading to resistance to biological decay which exceeds oak and some other species.

Tricoya ExDF 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.



# FEATURES AND BENEFITS



## DURABLE

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



## DESIGN FREEDOM

All the design, fixing and machining flexibility of medium density fibreboards



## FUNGAL RESISTANT

Effective barrier to fungal decay



## 50 YEAR WARRANTY

Peace of mind with a 25 year in-ground & 50 year above ground Tricoya ExDF warranty



## LOWER MAINTENANCE COSTS

Extended periods between exterior coatings maintenance



## SUSTAINABLY SOURCED

Sustainably sourced FSC certified



## ENHANCED STABILITY

Swelling and shrinking dramatically reduced



## PERFECT FOR COATING

Improved stability and durability enhances service life of the coating. Damaged coating or core will not affect durability



## DESIRED SERVICE LIFE OF 60 YEARS

Independent testing by BRE shows an expected service life of 60 years for exterior use



## NON-TOXIC AND RECYCLABLE

May be safely reused and recycled and is safe to incinerate

# PROPERTIES

Tricoya ExDF leads 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 siding, façade paneling, trim, fascias, soffits, etc. Tricoya ExDF can be cut, machined and installed using techniques and equipment commonly used throughout the building industry and requires very low maintenance thereafter. The flexibility of Tricoya ExDF offers endless design opportunities so that it can be cut to size, machined, painted, wrapped etc. without impacting on its unique properties.

### MOISTURE CONTENT

Tricoya ExDF 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 ExDF should be allowed to dry before processing, gluing or coating.

### REPORTS AND CERTIFICATES

The Fraunhofer Institute for Wood Research (WKL), concludes that the performance of Tricoya ExDF is so outstanding that it will allow an MDF type panel board to be used in applications that have not previously been possible.

Building Research Establishment (BRE) performance testing indicates that Tricoya ExDF achieves durability class 1 under EN 350-2. Durability is equivalent to teak and more durable than oak.

SP Wood Technology tested the product's ability to resist wood destroying basidiomycetes (white and brown rot).

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

### FIRE BEHAVIOUR

Tests, according to ASTM E84 (surface burning characteristics), have shown that Tricoya ExDF performs in line with other solid wood species and MDF, and well within class C. For copies of any reports and/or certificates, please contact your sales representative or visit our website.

All values on this page are approximates, due to the conversion to the imperial system. The corresponding original metric values are leading and can be found on our website.



PHYSICAL PROPERTIES	RANGE	TEST METHOD	UNITS	VALUE*
Density	± 2	EN 323	Lb / ft <sup>3</sup>	45 (9, 12 mm) 43.5 (15, 18 mm)
Dimensional Stability				
Thermal		NPL	% / °C	0.00137
Per 10% RH change		NPL	%	0.025
Thermal Conductivity		EN 12664	W / m K	0.095

### DIMENSIONS

Width	± 0.1 %	EN 324-1	feet	4 (1,220 mm)
Length	± 0.1 %	EN 324-1	feet	8 (2,440 mm)
Thickness	± 0.006	EN 324-1	inch	9 mm (0.354") 12 mm (0.472") 15 mm (0.591") 18 mm (0.709")

### MECHANICAL PROPERTIES

E-modulus		EN 310	PSI	≥ 435,000 (9 mm) ≥ 362,500 (12, 15, 18 mm)
Bending Strength		EN 310	PSI	≥ 4,350 (9 mm) ≥ 3,625 (12 mm) ≥ 2,900 (15, 18 mm)
Tensile Strength		EN 319	PSI	> 116

\*The results listed above are based on the minimum specification requirements for Tricoya ExDF manufactured by Medite Europe Ltd. All parameters are in compliance with en 622 parts 1 & 5. The right to modify these product specifications without notice is reserved. Tricoya ExDF contains no added formaldehyde and the formaldehyde content is less than 1.0 Mg/100 g using en 120 test method, which is far below the lower levels required by carb phase 2.

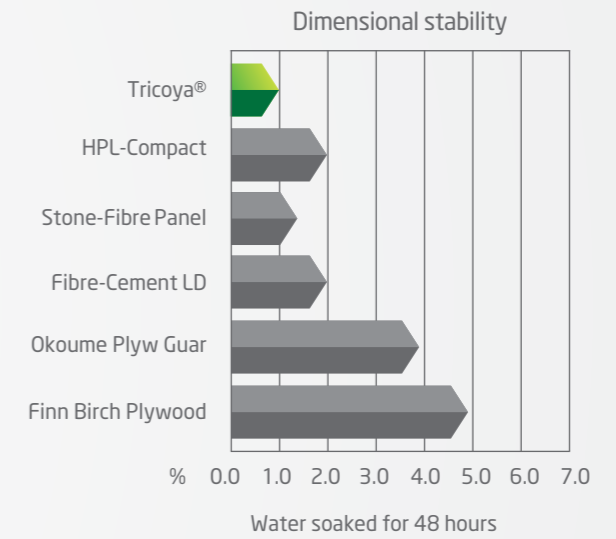
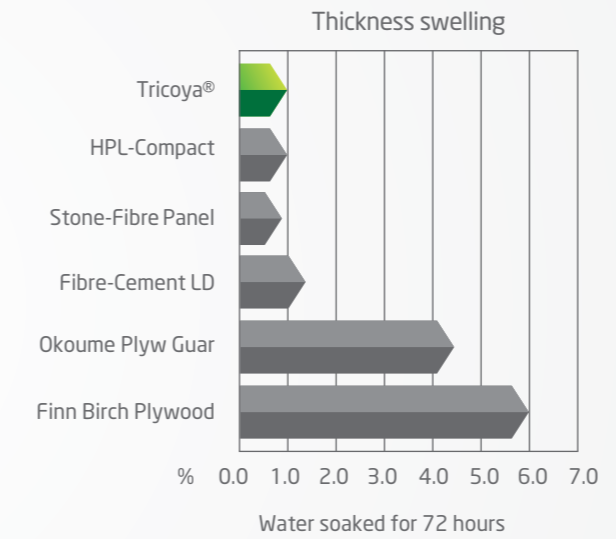


# PERFORMANCE COMES NATURALLY

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

The functionality and versatility of wood-based composite panels give them universal appeal. When properties such as high strength, lightweight, good insulation, excellent machinability and ease of use are required, normal MDF is the ideal choice for many applications.

Although MDF (in its various types) is widely used as a building material, it naturally has some shortcomings. Notably, dry wood is inclined to swell and shrink in response to changes in moisture in the atmosphere. Wood is also susceptible to degradation due to attack by micro organisms, like fungi, and is not therefore naturally durable.



These shortcomings have limited the use of solid wood and, in some cases MDF, in many markets and applications. Poor durability and dimensional stability will, for example, cause wood panels to crack and delaminate over time.

The good news is that Tricoya ExDF has been independently tested by leading UK & European institutes and has demonstrated superior dimensional stability and class 1 durability, even in changing weather conditions, meaning it may now be used in situations and applications where normal MDF panels cannot.



## KEY PRODUCT APPLICATIONS

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

## THE FINISHED ARTICLE

Tricoya ExDF can be cut, coated, sanded, glued, machined and fastened the same as any other high performing wood fibreboard – allowing users all the freedom normally associated with MDF but in extreme applications.

### PROCESSING

The panel may be cut, machined and used in exactly the same way as other MDF's. The Tricoya ExDF panel is delivered with a 150 grit sanded finish and can be sanded with fine sandpaper to achieve a smooth finish.

### COATING

Conventional water-based paint coatings may be used to decorate the panel.

### FIXING

Always install Tricoya ExDF with stainless steel fasteners & fixtures with A2 or A4 (EN 10088-1) quality or AISI type 304 or 316 when possible.

### SUPPLY

Tricoya ExDF is produced in board size 4 x 8 ft (1,220 x 2,440 mm). Other panel sizes may be made available to special order. Standard thicknesses produced are:

- 4 mm (0.157")
- 6 mm (0.236")
- 9 mm (0.354")
- 12 mm (0.472")
- 15 mm (0.591")
- 18 mm (0.709")

All dimensional values in this document are approximates, due to the conversion to the imperial system.



A product from Medite Europe Ltd. Tricoya® ExDF should always be installed and used in accordance with the written instructions and guidelines of Medite Europe Ltd and/or its agents (available upon request). Medite Europe Ltd accepts no liability for any defect, damage or loss that may occur where such written instructions and guidelines are not adhered to.

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