

Hi-Tech Wood Coatings

accoya® and tricoya®





Accoya® is a solid radiata pine wood harvested from sustainable fast growing forests.

It provides an excellent dimensional stability and durability performances even superior to those of the best tropical hardwoods. Accoya® is the result of almost one century's research. During these years, the acetylation process has been improved in order to make Accoya® a super wood. Acetylation modifies hydroxyl radicals into acetyl groups, in a reaction between wood and acetic anhydride, an acetic acid derivative (we know it as vinegar, in its diluted form). When the hydroxyl group transforms into acetic group, wood water absorption is severely reduced; wood has a better dimensional stability and an excellent durability (since it cannot be attacked by enzymes). For these reasons, Accoya® can be used in any situation. From windows to furniture. From coverages to doors. From shading devices to decking boardwalks. From nautical science, to bridges and big structures. . . Accoya® is extremely ductile, non-toxic and 100% recyclable natural sealer.

Tricoya® is a new high performance MDF panel product.

It demonstrates outstanding durability and dimensional stability in the most extreme and challenging environments. The product, like Accoya®, 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.





AQUARIS HI-TECH WOOD COATINGS

The outstanding properties of Accoya® and Tricoya® require the use of the best water-based wood coatings: Aquaris, Renner's range.

Coating operations can be performed with the conventional systems currently used in the joinery industry, ranging from brush to dipping and flow-coating to spray application, both conventional and electrostatic. Also, all the standard types of finishes can be achieved, from matt to high gloss systems, from translucent to fully matt finishes.

The choice of the suitable products have to be made taking into consideration the application method, the long service life required, the final aesthetical look and the compatibility with the substrate. In principle all coatings may be used, but being Accoya® and Tricoya® modified products, some polymers are more suitable than others to achieve the best adhesion and therefore the longest service life on these substrates.

Therefore Renner has created a specific range of products that can create a perfect marriage, both in terms of performances and of aesthetical look, with all joinery items made with Accoya® and Tricoya®.

All products mentioned in this presentation are available in an unlimited number of glosses and colors.

The following brief presentation is divided by intended end - use of the joinery: windows and shutters, claddings, external doors and panels, decking, garden furniture.





Shutters (detail): 4,5 years outdoors.

Accoya®



Meranti

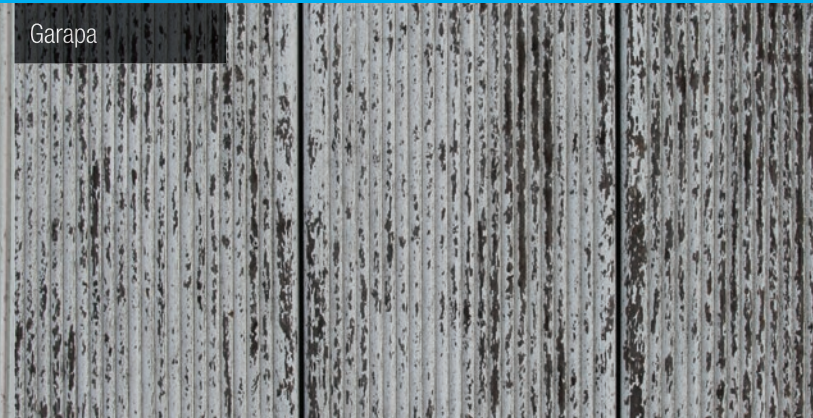


Decking (detail): 4 years outdoors. Matt system.

Accoya®



Garapa

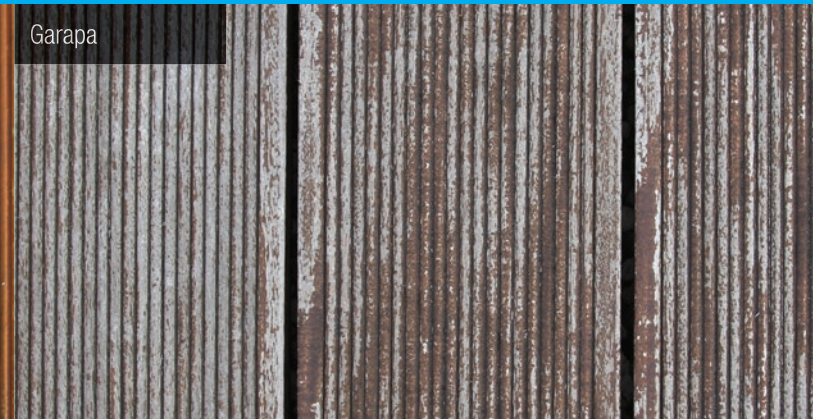


Decking (detail): 4 years outdoors. Translucent system.

Accoya®



Garapa





Renner Hi-Tech Coatings for Accoya®

Window frames and external doors

Coating system: matt			
Layers/coats	3	3	4
Primer Impregnating	YM M097	YM M097	YM M097
Base coat	YL M172	-	YL M172
Top coat	YO xxM397	YO xxM397	YO xxM397
Top coat	-	YO xxM397	YO xxM397
Expected service life before repainting	12	14	16
Coating system: translucent			
Layers/coats	3	3	4
Primer Impregnating	YM M092	YM M092	YM M092
Base coat	YL M172	-	YL M172
Top coat	YO xxM390	YO xxM390	YO xxM390
Top coat	-	YO xxM390	YO xxM390
Expected service life before repainting	10	12	14

Cladding

Coating system: matt			
Layers/coats	4 (hydro-oil, brush)	4 (acrylic, brush)	3 (spray)
Primer Impregnating	YM M101	YM M097	YM M097
Top coat	YS M300	YO 30M318	YO xxM397
Top coat	YS M300	YO 30M318	YO xxM397
Top coat	YS M300	YO 30M318	-
Expected service life before repainting	8	8	12
Coating system: translucent			
Layers/coats	4 (hydro-oil, brush)	4 (acrylic, brush)	3 (spray)
Primer Impregnating	YM M101	YM M092 or YM M101	YM M092
Top coat	YS M300	YO 30M318	YO xxM390
Top coat	YS M300	YO 30M318	YO xxM390
Top coat	YS M300	YO 30M318	-
Expected service life before repainting	6	6	10

Decking

Coating system: matt		
Layers/coats	4 (acrylic, brush)	4 (hydro-oil, brush)
Primer Impregnating	YM M097	YM M101
Top coat	YO 30M318	YS M300
Top coat	YO 30M318	YS M300
Top coat	YO 30M318	YS M300
Expected service life before repainting (*)	4	4
Coating system: translucent		
Layers/coats	4 (acrylic, brush)	4 (hydro-oil, brush)
Primer Impregnating	YM M092 or YM M101	YM M101
Top coat	YO 30M318	YS M300
Top coat	YO 30M318	YS M300
Top coat	YO 30M318	YS M300
Expected service life before repainting *	3	3

(*) With moderate wearing due to light foot traffic and weathering site

Renner Hi-Tech Coatings for Tricoya®

External doors

Coating system: matt			
Layers/coats	3	3	4
Primer Impregnating	YM M097	YM M097	YM M097
Base coat	-	YL M272	YL M172
Top coat	YO xxM397	YO xxM397	YO xxM397
Top coat	YO xxM397	-	YO xxM397
Expected service life before repainting	14	14	16

Remarks: service life depends on quantity applied. The specified years are intended for an exposure in average conditions.
Stained systems with impregnants and colourless and/or light shades topcoats are not included (e.g. larch, durmast, teak colouring)

External claddings and panels

Coating system: matt		
Layers/coats	3	3
Primer Impregnating	YM M097	YM M097
Base coat	-	YL M272
Top coat	YO xxM397	YO xxM397
Top coat	YO xxM397	-
Expected service life before repainting	12	12

Product overview

Beside the above mentioned products, other Renner coatings could be used, depending on the application system and the final desired result. In the following table a more extensive presentation of such product is shown.

Product type	Product name	Application	Colour range	Key features
Wood preservative	YM M101	dipping, flow-coat	colourless	Protects against blue stain fungi and wood degrading fungi (EN 113 and EN 152)
Impregnating and antibleed primer	YM M097	dipping, flow-coat	(C02) white, (NTR) neutral	Provides good adhesion and prevents discolouration of the topcoat
Impregnating primer	YM M092	dipping, flow-coat	translucent	Equalises surface color
Intermediate	YL M172	dipping, flow-coat	colourless	Fills end grain, reduces the need for sanding
End grain sealer	AY M499	bottle with spout	(C02) white or colourless	Minimises moisture vulnerability of exposed end grain
V-joint sealer	AP M902/C02	cartridge	white	Minimises moisture vulnerability of exposed end grain in V-joint
	AP M903		colourless	
Base coat	YL M272	spray	(C02) white	Prevents discolouration of the topcoat
Top coat	YO xxM397	spray	matt	Less yellowing in opaque system. No blocking formulation
	YO xxM390	spray	translucent	Excellent clarity. No blocking formulation
	YO 30M318	brush	matt, translucent	Less yellowing in matt system. Excellent clarity in translucent system. No blocking formulation
	YS M300	brush	matt, translucent	Hybrid system (hydro-oil), controlled corrosion, no flaking



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