TCBM

Resysta®
THE BETTER WOOD

INSTALLATION REFERENCES

RESYSTA CP 120612/CP 120412

Version 1 / March 2012 / North America

Resysta®
THE BETTER WOOD

1. Basics

A The dimensional change of Resysta is solely dependent on the thermal expansion. Air humidity and water have no influence on dimensional change. Thermal expansion has to be considered at installation.

Material Temperature	30 F	65 F	100 F	Abbuting Gap
Profil 12'	3/8"	1/4"	1/16"	3/8"

B Cutting to length should be carried out at consistent material temperature. Therefore, the material should be stored in the shade or in areas where it is not exposed to direct sunlight. The material can warm up considerably in the sun, leading to an increased change in length. In the case of more distinct fluctuations in material temperature, cutting to length may have to be adapted accordingly.

C Resysta has a high vapor diffusion resistance. Please consider at installation.

D Resysta has a class A fire rating (ASTM-E84).

E Cut-off pieces and/or abrasive dust have to be disposed separately. Please comply with regulations of your competent waste management. You may under no circumstances burn Resysta yourself.

Wood Preservation – Properties in Comparison to Wood

In comparison to wood, and owing to the material properties, the following **does not apply** to Resysta:

- discoloring of the surface due to chemical decomposition and wash off of wood components.
- resin discharge
- surface erosion
- crack formation due to expansion and shrinking
- ingress of moisture (water)
- dishing due to varying moisture spreading
- capillary action at frontal area

Resysta is an innovative material consisting of polymers and rice husks and does not possess typical wood characteristics like graying, cracking and splintering. Owing to the special properties of Resysta the basic installation technique merely differs in some aspects from the installation of other products.

STORAGE

- please store Resysta products horizontally on level surfaces
- the profiles should never be covered with plastic foil or the like – no matter if already mounted or not. Condensation and accumulated water can cause staining.

2. Product Range *

RESCP120612

material	Resysta
color	natural
width x height x depth	1/2" x 6" x 12'

RESCP120412

material	Resysta
color	natural
width x height x depth	1/2" x 4" x 12'

* Additional profiles are available, which can, for example, be used as runners or end pieces.

3. General Information

The assembly should be carried out by a skilled specialist.

Standard woodworking tools can be used for the processing of the material.

SAWING: Resysta may be cut longitudinal and transversal with all customary saws.
MILLING: Any profiles can be milled easily by means of customary woodworking machines.
SANDING: Resysta should be grinded in longitudinal direction only.
Depending on the required surface structure, we recommend the use of sand paper with graining between 24 and 60. Fine-grit sand paper should only be employed for the removal of dirt.
DRILLING: Drilling can also be done with customary standard wood drills.

Bonding

Resysta International GmbH offers adhesives and bonding agents for the bonding of surface profiles with floor, wall and ceiling. Resysta may be glued with standard PU-adhesive or a suitable plastic adhesive.

Finishing/Staining

Resysta can be treated with Resysta stains. You will find especially developed and carefully matched color shades in the Resysta Color Concept. It is recommended to use the colors and sealer especially developed for Resysta.

Cleaning and Care

Resysta is extremely easy to maintain. Please refer to cleaning and maintenance details specified in the separate information sheet or at www.resysta.com.

4. Pre-Treatment

Application of the color-stain (FVG)

To obtain a uniform and optimal color result, the stain should be applied at consistent basic conditions.

We therefore recommend applying the stain before installation on each profile individually. Application temperature approx. 40° - 80°F, relative air humidity approx. 50 – 60%.

Application of the sealant (RFS)

To achieve increased protection against soiling and weathering we generally recommend application of the sealer. The colorless sealer may be applied to Resysta untreated and Resysta stained material. For further details please refer to data sheet 'stains and sealers' at www.resysta.com.

Surface treatment Resysta

Reasons for recommended surface treatment of Resysta:

- color scheme
- protection against soiling
- protection against fading of color

5. Installation Instructions

1. Rear Ventilation

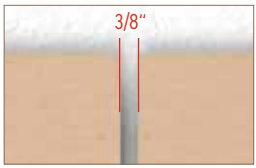
Due to Resysta's high diffusion resistance, a rear ventilation of the facade is always required. The rear ventilation space must consistently measure at least 3/4" and may not be narrowed.
The distance must consistently be at least 3/4" wide.

2. Center Distance

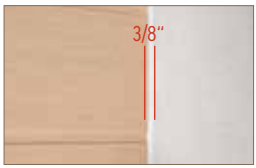
RESYSTA PROFILE		MAXIMUM SPAN
RESCP120612		16"
RESCP120412		16"

5. Installation Instructions

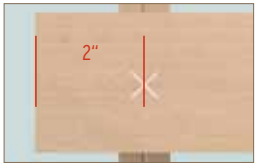
3. Spacing



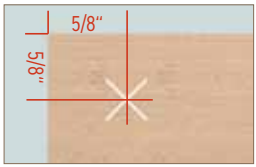
The expansion joint should measure 3/8“ with frontal profile joints.



When connected to another building, an expansion joint of 3/8“ is required.



The distance from profile end to the screw connection may measure a maximum of 2“.



The distance from screw to profile edge must measure at least 5/8“.

4. Edges

Ingress of moisture at the edges cannot occur. To improve color adherence, we recommend rounding off sharp edges and cutting edges prior to color treatment with 80 – 100 grid sand paper.

5. Frontal area protection

Resysta does not feature capillary action. Therefore, a frontal area protection with color is not strictly necessary. Paint coating may however be done for visual reasons.

6. Driving rain protection

Thanks to the high material density no adverse effects are caused by driving rain.

7. Splash water protection

Thanks to the high durability (resistance) of Resysta a material impairment does not occur. Increased soiling can be expected and can result in staining. We recommend treating Resyta with sealer (RFS) in the affected area. It is absolutely required to protect the substructure against ingress of moisture.

6. Assembly

6.1. Substructure

The substructure has to be designed according to professional carpentry requirements. The dead load and the high diffusion resistance of Resysta has to be taken into consideration. Fastening of the facade is generally carried out on a wooden substructure.

Please attend to the following guidelines for substructures:

- wood must correspond to sort-classification S10 according to DIN 4074
- individual cross-section must be chosen according to DIN 1052
- wood has to be preserved according to DIN 68800 – wood preservation in building construction
- wooden battening and joists have to be screwed diagonally with 2 screws (A2) at the cross-over point
- fixation with fasteners approved by building authorities and according to manufacturer specifications
- the substructure has to be adjusted in alignment and perpendicular orientation

For the substructure, Resysta International GmbH provides special profiles, which may also be employed. For more details please refer to www.resysta.com.
We explicitly recommend the use of the Resysta substructures because of their durability and water resistance.

6. Assembly

The support battening can be installed vertically or horizontally. The following spacing has to be considered prior to support assembly.

vertical support battening = installation CP horizontal

horizontal support battening = installation CP vertical

The following distances have to be considered for support battening workmanship:

- maximum support span of RESCP120612 and RESCP120412: 16“
- spacing frontal or to another building structure: 3/8“
- maximum excess end: 2“

6. Assembly

IMPORTANT FIXING INFORMATION! To allow expansion and contraction of the RESCP120612/RESCP120412 boards, cut 1 inch long slots with a biscuit joiner wherever you screw fasten the boards. Place the screw in the middle of the hole and allow the boards to expand and contract when tightening the screws.

6.2. Fixing the first profile

Uses an aluminum J metal to fasten the bottom of the first board or screw fasten it at the bottom of the board and in the groove. Always cut 1 inch long slots with a biscuit joiner as shown in the images. Fasten screw in the middle of the holes and allow the boards to expand and contract when tightening the screws.

6.3. Fixing the next profiles

Insert further profiles in the previous one and screw fasten these in the grooves. Always cut 1 inch long slots with a biscuit joiner as shown in the images. Fasten screw in the middle of the holes and allow the boards to expand and contract when tightening the screws.

6.4. Fixing the closing profile

If necessary, cut the closing profile to the correct width and screw connect at the edges. Always cut 1 inch long slots as shown in the images. Fasten screw in the middle of the holes and allow the boards to expand and contract when tightening the screws.

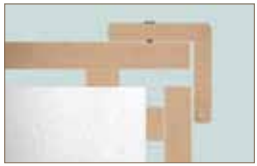
For horizontal installation please note:

At horizontal installation, the profiles have to be mounted in a way that ensures controlled water drainage.

6.5 Corner end piece

Corner solutions can be worked similar to wooden facades.
Thermal expansion has to be implicitly considered for the spaces.

open miter joint



open straight corner

Optionally open joints can also be concealed. e.g. with RESANP020212.

NOTE: Cover and corner end piece have to be chosen in a way that it does not interfere with the free expansion of Resysta. Moisture penetration into the substructure must by all means be avoided.
When designing the inner corner, it also has to be ensured that Resysta can freely expand and that moisture penetration is avoided.

6. Assembly

6.6. Lateral end piece

recessed end piece

overlaying end piece

consider joint distances at lateral end pieces

6.7. Joining

Joining to roof frames, window lintels, window reveals, apron walls etc., has to be carried out in a manner that avoids ingress of water into the substructure and allows for controlled water drainage. In this regard the use of aluminum Z-profiles is recommended.

Connections can also be carried out with various Resysta profiles, for instance apron walls with RESIN5812.
When designing the connections, thermal expansion of Resysta has to be taken into account.

7. Important Information

Resysta is a new construction material. Basic constructions, fixing material, etc. have to be conducted in accordance with the general state of technical knowledge and adjusted to the respective application area and purpose.

Check material quality prior to installation.
In case of complaints the material may not be installed.

Please adhere to all current standards and regulations as well as VOB.

Illustrations in this guideline are no mechanical drawings and display no technical solutions.

8. Technical Data

Density	ASTM D2395:2002	approx. 1.46 kg/m^3
Coefficient of Linear Thermal Expansion	ASTM D696	3.6x10(-5)mC
Water Absorption and Air Humidity Behaviour	ASTM D1037:2006a	none or very low water absorption (only surface wetting)
Weathering and UV Resistance	QUV Test	Resysta surfaces treated with glaze show extremely high resistance
Skid Resistance	DIN 51097	C Rating (highest rating)
Fire Behaviour (German Standard)	EN ISO 11925-2	B2, normal flammability (by adding flame retardants, a higher rating of B1 can be reached)
Fire Behaviour (US Standard)	ASTM E84	A Rating (flame propagation 25, smoke emission 450)
Fire Behaviour (British Standard)	BS 476 Part 6&7	Rating 1
Durability (Resistance to Wood-Destructive Fungi)	DINV ENV 12038:2002	the material has not been affected, highest durability – Class 1
Emission	DIN EB ISO 9001/14001	passed
Brinell Hardness (HB)	EN 1534	81,1 N/mm^2
Friction Coefficient μ untreated	EN 13893	0,46
Friction Coefficient μ with 2K	EN 13894	0,52
Screw Withdrawal Resistance	EN 320.2011-07	5777 N

Resysta®
THE BETTER WOOD

The Future Formula Is Called Resysta

commodities used:

approx. 60% rice husks + approx. 22% rock salt + approx. 18% mineral oil = Resysta

All specifications provided are subject to our installation guidelines and appropriate use at outdoor exposure.

The installation guide may be adapted to technical progress without prior notice.

A download link for the current version is available at www.resysta.com.