



PanelTack HM

Bonding system

for Equitone panels Natura, Natura Pro, Pictura, Textura and Tectiva

Product

Simson PanelTack HM is a moisture curing elastic adhesive based on SMP (Silyl Modified Polymer) PanelTack HM is solvent- and iso-cyanate free.

Applications

Bonding of decorative Equitone panels for:

- Exterior façade- and interior wall cladding.
- Roof eaves.
- Ceiling- and wall-covering panels in porches.
- Parapets.

This concerns the Equitone façade panels Natura, Natura Pro, Pictura, Textura and Tectiva TE80 Antracite, for which Primer MSP (minimal drying time 1 hour) is advised as pretreatment of the backsides. For all other colours Tectiva (formerly known as Eter-Color; TE00 Calico, TE10 Linen, TE20 Pebble, TE30 Sandstorm, TE40 Sahara, TE50 Pistachio, TE60 Hessian and TE90 Chalk) another primer is advised, namely Primer Q with a minimal drying time of 2 hours.

Also other architectural panels of Eternit can be bonded assuming that the application is approved by Eternit N.V. and Bostik.

Decorative Equitone panels

These products are a composition of portland cement and sand, with mineral additives and natural organic fibres. The products are asbestos free and as good as maintenance free.

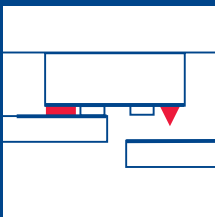
Simson PanelTack HM features

- ✓ Durable elasticity and high mechanical strength.
- ✓ Optimal tension distribution.
- ✓ Tested based on the Guideline BRL 4101 part 7.
- ✓ Good moisture- and weather resistance.
- ✓ Simple and quick mounting.

Simson bonding system

The bonding system consists of:

- | | |
|----------------------|---|
| ✓ PanelTack HM | elastic adhesive. |
| ✓ Primer SX | black primer for wooden support construction |
| ✓ Primer MSP | for pre-treatment of the Equitone panels Natura, Natura Pro, Pictura, Textura and Tectiva TE80 Antracite. |
| ✓ Primer Q | for pre-treatment of all other colours Tectiva |
| ✓ Prep M | primer for metal support construction (aluminium or galvanised steel) |
| ✓ FoamTape 12 x 3 mm | for the initial bonding of the panels and to guarantee a sufficient mass. |





PanelTack HM Bonding system for Equitone panels

Information for the construction designer

Technical Guideline BRL 4101 part 7

For calculations the following values can be used:

For Natura, Natura Pro, Pictura, Textura and Tectiva TE80 Antracite:

	Support construction	Primer support construction	Pretreatment façade panel	Calculation value Shear-strength N/mm ²	Calculation value Tensile-strength N/mm ²	Max. elastic deformation mm
PanelTack HM	Wood	Primer SX Black	Primer MSP	0.18	0.4	3
	Metal (Aluminium)	Prep M	Primer MSP	0.18	0.4	3

For all colours Tectiva (except TE80 Antracite):

	Support construction	Primer support construction	Pretreatment façade panel	Calculation value Shear-strength N/mm ²	Calculation value Tensile-strength N/mm ²	Max. elastic deformation mm
PanelTack HM	Wood	Primer SX Black	Primer Q	0.12	0.4	3
	Metal (Aluminium)	Prep M	Primer Q	0.12	0.4	3

For constructional calculations conforming to the Guideline BRL 4101 part 7, a safety factor 4 for the tensile strength and a safety factor 10 for the shear strength were taken into account. The width of an adhesive bead is approx. 13 mm.

Weight load of panels

The load as a result of the weight of the cladding panels does not need to be considered in calculations, as this load will be easily met by the bonding system.

Wind loads

Wind loads must be taken into account. See Eurocode 1 part 1-4, for the Netherlands NEN-EN 1991-1-4 (formerly NEN 6702) and for Belgium NBN-EN-1991-1-4 (formerly NBN-B-03-002-1). Demands and requirements concerning wind loads in countries other than the Netherlands or Belgium may differ in content with the Dutch and Belgian standards, therefore we advise to consult local authoritative test institutes.

Fire behaviour

PanelTack HM complies to class B-s1-d0 according to EN 13501-1.

Maximum panel size

PanelTack HM is highly elastic therefore possible deformation of the panels can be absorbed in the adhesive layer. When mounting the panels a maximal occurring (diagonal) deformation or warp less than 1 mm/m¹ must be taken into account. According to the Guideline BRL 4101 part 7 the maximal elastic deformation, which still can be absorbed in practice by the standard PanelTack HM system, may not exceed 3 mm. This means that the max. panel sizes (3100 x 1250 mm for Natura. Natura PRO and Pictura, 3100 x 1500 for Textura and 3050 x 1220 for Tectiva) may be bonded.

Remark: Panels must be even and flat prior to bonding. In this aspect large panels are more critical than small panels, therefore extra care regarding correct handling and storage is inevitable.

Support construction: dimensions and distances

The minimal widths of supports in the support construction depends on the function of the supports:

- I. support for joints 95 mm
- II. end- and intermediate supports 45 mm

Also see detailed drawings



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The exact minimal thickness of the (wooden) supports depends on the support structure. See the application instructions of Eternit. The thickness is determined in function of the primary and secondary support construction. The width of the battens is determined in function of cladding type and the distribution in the façade area. The dimensions of aluminium T and L profiles are determined in a similar way. For detailed information: refer to the application instructions of Eternit.

The following non binding reference values for the maximal center-to-center distances between the supporting battens can be used:

Location	Building height	Middle area façade		Edge area façade and single span	
		Max. actual wind load	Max. center-to-center distance supporting laths	Max. actual wind load	Max. center-to-center distance supporting laths
Wind zone	m	N/m ²	mm	N/m ²	mm
Land	0-10	650	600	1000	500
Land	0-20	800	600	1200	500
Land	20-50	1000	500	1500	400
Coast	0-20				

Remark: If the panel manufacturer requires under specific circumstances smaller distances than the ones mentioned in the table, these maximal distances as required by the manufacturer must be used.

For ceiling and awning applications a center-to-center distance of 400mm is advised.

Reference is made to the application guidelines of Eternit.

Support construction: ventilation

Behind the panels there has to be an open ventilated cavity with the following minimum width:

Building height	0-10 m	10-20 m	20-50 m
Minimum cavity width	20 mm	25 mm	30 mm

Furthermore ventilation openings / slots at both top and bottom of the façade bonded panels (≥ 10 mm/m of 100 cm²/m) as prescribed by Eternit.

Support construction: choice of material

Suitable timber: Four-sided clean-planed, clean, dry, dust- and grease free types of wood (deal, pinewood, meranti etc.) Wood types need to be sufficiently durable for building constructions. Maximal moisture content of the wood should be 18%. The wood may contain preservatives based on salts, zinc and copper according to the Dutch NEN 3251 Standard (e.g. Wolman salts).

Suitable metal: Dry and smooth (galvanized) steel or (anodized) aluminium. These metals must be rustproof and conform to relevant standards. Enamelled metals are suitable as well, however different instructions for use may apply. Consult Bostik about this.

Lacquers: A limited number of lacquers applied by means of spraying, are suitable for bonding with Simson PanelTack HM. Consult Bostik about this.

Minimal joint width

The minimal recommended width of an open joint between the panels is 10 mm in order to facilitate free movement of the panels.



PanelTack HM Bonding system for Equitone panels

Consumption indication per 100 m²

	Number of units	Standard packaging
Simson FoamTape	12	25 metre roll
Simson PanelTack HM	50	290 ml cartridge
Simson Primer SX Black (wood)	3	1000 ml tin
or		
Simson Prep M (metal)	3	500 ml tin
For the backside of Natura, Natura Pro, Pictura, Textura and Tectiva TE80 Antracite:		
Simson Primer MSP	3	500 ml tin
For the backside of Tectiva (except Tectiva TE80 Antracite)		
Simson Primer Q	3	1000 ml bottle

Application conditions:

The cladding panels can be bonded indoors (in a factory) or on the building site. The following conditions apply:

- ✓ Do not pre-treat or bond in case of precipitation.
- ✓ Do not pre-treat or bond in case of high air humidity for instance during dense fog.
- ✓ Avoid condensation on both the panels and support construction: the dew point must be 3°C above substrate temperature.
- ✓ Apply between +5°C and +30°C.

PanelTack HM Bonding system for Equitone panels

Method of use in steps

1. Pre-treatment support construction

The support construction must be primed before or after mounting. The primer can be applied both in- and outdoors. Use Simson Primer SX Black for wood and Simson Prep M for metal. One (continuous and closed) coat of primer is sufficient. Residues of primer should not be used. Avoid contamination of the support construction with dust and grease after application of primers. Wooden support construction: Shake the unopened tin of Primer SX Black well before use and pour the primer into a clean paint tray. Use the special application set with the rollers for Simson Primer SX Black. Apply the primer to the adhesion surface in a continuous and closed coat or film. After application the minimal drying time is 60 minutes.



Pre-treatment wooden support construction with Primer SX Black

Metal support construction: Apply Prep M straight from the tin on a clean, lint free and pigment free cloth or tissue paper. Firmly rub the metal with the primer-soaked cloth. Minimal drying time after application 10 minutes. Replace cloths regularly by new ones.

2. Pre-treatment panel

2.a. Natura, Natura Pro, Pictura Textura and Tectiva TE80 Antracite

Use Primer MSP for the pre-treatment of the bonding side of the cladding panel. Pour Primer MSP in a clean paint tray. Use the special application set with rollers. Apply sufficient primer in a continuous and closed coat. Apply the primer in widths of 10 - 15cm over the full length of the panel (where the adhesive beads ought to be). Minimal drying time after application 60 minutes.

2.b. All colours Tectiva (except TE80 Antracite)

Use Primer Q for the pre-treatment of the bonding side of the cladding panel. Pour Primer Q in a clean paint tray. Use the special application set with rollers. Apply sufficient primer in a continuous and closed coat. Apply the primer in widths of 10 - 15cm over the full length of the panel (where the adhesive beads ought to be). Minimal drying time after application 2 hours.

3. Application of foamtape

Once the primers have dried, Simson FoamTape is applied vertically to the support construction without any interruption. Press Simson FoamTape firmly onto the support construction and cut it with a sharp knife. When deciding on the correct position and length of the tape also bear in mind the dimensions and function of the supports, the dimensions of the panels and the necessary space for the adhesive. Do not immediately remove the protective layer after application of the FoamTape. (See step 5).

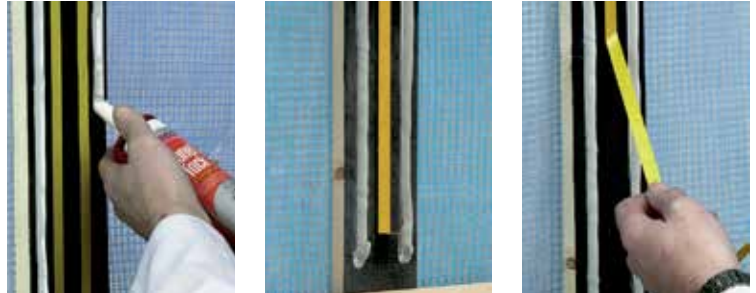




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4. Application of adhesive with special nozzle

Apply Simson PanelTack HM only vertically and without interruption. Use a hand- or an air pressure caulking gun. A special V-shaped nozzle has been packed with every cartridge Simson PanelTack HM. This enables to apply a triangular adhesive bead with a width and height of 9 mm. Using this special nozzle prevents the enclosure of air bubbles and unnecessary loss of adhesive. Opposite the V-cut one can cut the nozzle obliquely.



5. Placing the panel

Now remove the protective layer from the FoamTape. Apply the cladding panel within 10 minutes after the application of the PanelTack HM adhesive. Fix the panel by gently pressing it onto the adhesive beads and, if necessary, correct its position. Correction is still possible until the panel touches the FoamTape. For good and easier positioning of the panel eventually use a joint spacer, supporting blocks or horizontal supporting laths. For easier handling a glass suction clamp can be useful. Once the panel is positioned correctly, the panel must be pressed down by gently rubbing over the entire length of the FoamTape. Avoid that the foam tape is pressed together. Now it is no longer possible to correct the panel position. See the detail drawings.

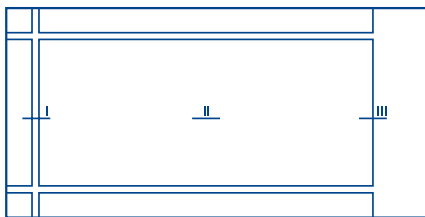


6. Cleaning

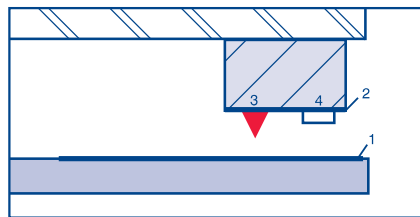
Avoid contamination of the front side of the panels with primer or adhesive. Should this nevertheless occur then immediately remove or scrape off most of the uncured product and then remove residues with Simson Liquid 1 using a clean, lint free and pigment free cloth or tissue paper. Please note however that it will not always be possible to remove residues without leaving stains. Cured primer and adhesive can only be removed mechanically.

Detail drawings

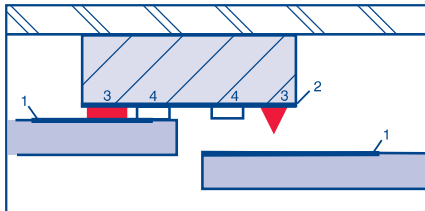
Façade / wall (front view)



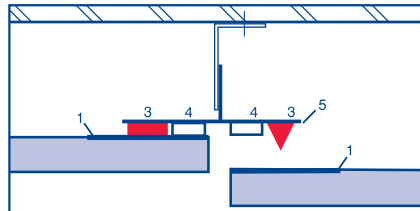
III. End support - wood



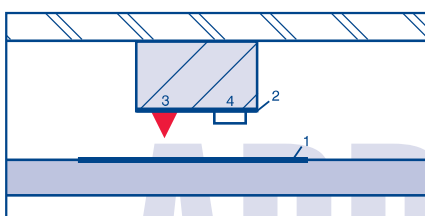
I. support for joints – wood



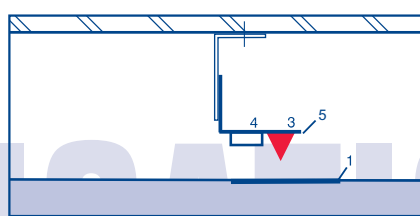
I. support for joints - aluminium



II. intermediate support - wood



II. intermediate support - aluminium



1. Simson Primer MSP *
2. Simson Primer SX Black
3. Simson PanelTack HM
4. Simson FoamTape
5. Simson Prep M

* for Tectiva (except TE80 Antracite) Primer Q.



PanelTack HM Bonding system for Equitone panels

Technical data

PanelTack HM

Description	1-component (moisture curing, elastic adhesive based on SMP (Silyl Modified Polymer)	
Specific gravity	1,4 g/ml	
Skin formation (start)	15 minutes	(at 20°C/50%RH)
Shore A	approx. 55	
Shear strength	1,80 N/mm ²	
Tensile strength	2,25 N/mm ²	
Max. allowed elasticity	3,0 mm	
Application temperature	+5°C till +30°C	
Temperature resistance	-40°C till +90°C	
Packaging	290 ml cartridge	article code 30132201
	600 ml sausage	article code 30132181
Colour	black	
Storage stability	store cool and dry between +5°C and +30°C. Can be stored for at least 12 months in unopened packaging. Opened packaging has limited shelf life. See packaging code: B(est) B(efore) mm/yy	

Primer MSP

Application	pretreatment of the backside of Natura, Natura Pro, Pictura Textura and Tectiva TE80 Antracite	
Min.drying time	60 minutes	
Min. drying time	60 minutes	
Application temperature	+5°C till +30°C	
Dry contents	40%	
Specific gravity	0,95 g/ml	
Flash point	< 21°C	
Colour	light yellow transparent	
Storage stability	Store cool and dry between +5°C and +30°. Can be stored for at least 12 months in unopened packaging. See packaging code B(est) B(efore) mm/yy	
Article code	500 ml tin	30022080

Application set and rollers

Simson primer MSP and Primer SX Black can be applied with a special application set: velvet brush rollers with handle and paint tray. The rollers offer low consumption and an optimal pre-treatment.

Further information

The following publications are available on request
 ✓ Material Safety Data Sheets (MSDS)

Bostik B.V.

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Primer Q

Application	Application pretreatment of the backside of Tectiva, except TE80 Antracite	
Min.drying time	2 hours	
Application temperature	+5°C till +30°C	
Solvent contents	0%	
Specific gravity	1,2 g/ml	
Colour	reddish brown	
Storage stability	Store cool and dry between +5°C and +30°. Can be stored for at least 6 months in unopened packaging. See packaging code B(est) B(efore) mm/yy	
Article code	1000 ml plastic bottle	30600242

Primer SX Black

Application	pre-treatment of wooden support construction	
Dry contents	50 %	
Specific gravity	1,03 g/ml	
Flash point	< 21°C	
Drying time	60 minutes (at 20°C/50%RH)	
Colour	black	
Storage stability	Store cool and dry in unopened packaging between +5°C and +30°C. Can be stored for at least 12 months. Opened packaging has limited shelf life. See packaging code B(est) B(efore) mm/yy.	
Article code	1 litre tin	30023350

Prep M

Application	pre-treatment of metal support construction	
Minimal drying time	10 minutes	
Application temperature	+5°C till +30°	
Specific gravity	0,76 g/ml	
Flash point	< 21°C	
Colour	light yellow / transparent	
Storage stability	store cool and dry between +5°C and +30°C. Can be stored for at least 6 months in unopened packaging. Opened packaging has limited shelf life. See packaging code B(est) B(efore) mm/yy.	
Article code	500 ml tin	30022111

FoamTape

Description	two-sided self adhesive foam tape with a protective layer on one side	
Application	for initial bond of the panel and a spacer for a sufficient mass and thickness of the adhesive bead	
Specific gravity	approx. 60 kg per m ³	
Shear strength	approx. 0,27 N/mm ²	
Tensile strength	approx. 0,27 N/mm ²	
Packaging	25 metre roll	
Application temperature	+5°C till +30°C	
Storage stability	Store cool and dry between +5°C and +30° Can be stored for 12 months in unopened packaging	
Colour	black	
Article code		30182771