

SINTEF Technical Approval

TG 20471

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 Provided listed on
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SINTEF confirms that

Traspir 110 and Traspir Wand 110

has been found to be fit for use in Norway and to meet the provisions regarding product documentation given in the regulation relating to the marketing of products for construction works (DOK) and regulations on technical requirements for building works (TEK), with the properties, fields of application and conditions for use as stated in this document



1. Holder of the approval

Rotho Blaas srl
 Via Dell'Adige N. 2/1
 I-39040, Cortaccia (BZ)
 Italy

2. Product description

Traspir 110 and Traspir Wand 110 is a thermally bonded triple layer membrane consisting of two layers of non-woven spun bonded polypropylene with a microporous PP film in the middle. The product is intended for the use as wind barrier in walls and as a combined roofing underlay and wind barrier in roofs.

Measures and tolerances are given in table 1.

Rothoblaas Flexi Band and Signo are tapes that is used to seal joints in Traspir 110 and Traspir Wand 110.

Table 1
 Measures and tolerances for Traspir 110 and Traspir Wand 110

Property	Measure	Tolerance	Unit
Roll width	1.5 / 3.0	-0.5 / +1.5 %	m
Roll length	> 50	-	m
Mass per unit	0.112	±10 %	kg/m ²

3. Fields of application

Traspir 110 and Traspir Wand 110 is used as a wind barrier in thermal insulated wooden wall and roof constructions, and as a combined roofing underlay and wind barrier in thermal insulated, pitched wooden roofs with ventilated, discontinuous roofing and external drainage.

Traspir 110 and Traspir Wand 110 can be used as wind barrier on walls in hazard class 1-6 in fire class 1 in buildings up to three floors if each dwelling unit has direct access to the ground level (not via stairs or staircases). For other use, a fire safety analysis must be performed.

Traspir 110 and Traspir Wand 110 can be used as combined roof underlayer and wind barrier on roofs in buildings in hazard class 1-6 in fire class 1, 2 and 3.

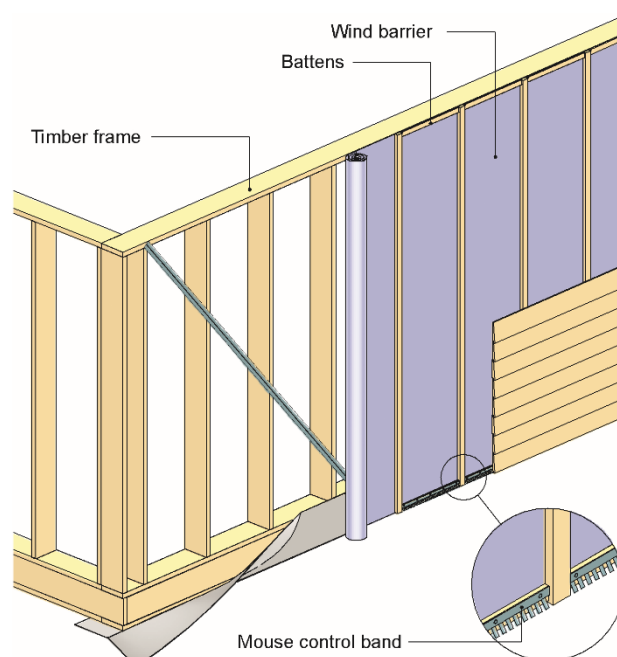


Fig. 1
 Traspir 110 and Traspir Wand 110 used as wind barrier in a timber frame wall

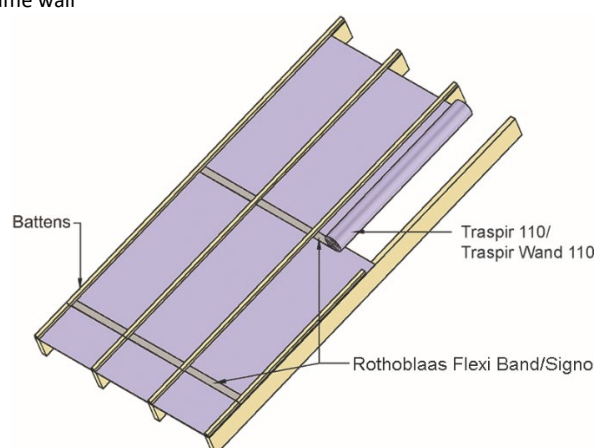


Fig. 2
 Traspir 110 and Traspir Wand 110 used as combined roof underlayer and wind barrier in pitched roof, laid across the roof slope on top of the rafters

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 Enterprise register: NO 919 303 808 MVA

Table 2

Product properties for fresh material of Traspir 110 and Traspir Wand 110

Property	Test method EN	Declaration of performance ¹⁾	Control limit ²⁾	SINTEFs recommended minimum values	Unit
Dimension stability	1107-2	-	≤ 2	≤ 2	%
Water tightness; 200 mm for 2 hours	1928 (A)	W1	Tight	Tight	-
Air tightness material	12114	-	≤ 0.05	-	m ³ /(m ² h50Pa)
Air tightness construction	12114	-	≤ 0.1 ³⁾	≤ 0.50 ⁵⁾ ≤ 2.50 ⁶⁾	m ³ /(m ² h50Pa)
Rain and wind tightness construction	NT Build 421	-	400 ^{3) 4)}	300	Pa
Tear resistance (nail shank)	L 12310-1 /	115 -30/+55 135 -35/+60	≥ 85	≥ 35	N
	T 13859-1/2		≥ 100		
Tensile strength	L 12311-1 /	250 -30/+35 165 -25/+30	≥ 220	≥ 100	N/50 mm
	T 13859-1/2		≥ 140		
Elongation	L 12311-1 /	50 -25/+20 70 -20/+30	≥ 25	≥ 15	%
	T 13859-1/2		≥ 50		
Vapour permeability s_d value	1931	0.02 -0.01/+0.015	≤ 0.035	≤ 0.5	m

¹⁾ Manufacturers Declaration of Performance, DoP²⁾ Control limit shows values, product must satisfy during internal factory production control and audit testing³⁾ Result from type testing⁴⁾ Measured at a roof pitch of 15 °⁵⁾ Applies to wind barrier system which makes it possible to fulfil any requirements regarding airtightness (n_{50}) given in the building regulations and in the Norwegian passive house standards before the vapour barrier is mounted.⁶⁾ Applies to wind barrier system which is sufficiently airtight to protect the insulation to avoid cooling from wind but not to fulfil the requirements regarding airtightness (n_{50}) given in the building regulations and the Norwegian passive house standards before the vapour barrier is mounted.

L - Longitudinal T - Transversal

4. Properties

General

Product characteristics for Traspir 110 and Traspir Wand 110 are shown in table 2.

Properties related to fire

Traspir 110 and Traspir Wand 110 have a reaction to fire class E according to EN 13501-1.

Durability

Traspir 110 and Traspir Wand 110 are considered to have satisfactory durability based on laboratory testing before and after accelerated artificial climate ageing. The products must be protected against direct exposure to UV radiation in the complete construction. The products must be covered as soon as possible after installation at roofs and walls, without unnecessary delay.

The durability of adhesive properties for Rothoblaas Flexi Band and Signo tapes has been tested according to NT Build 495 and EN 1296.

Rothoblaas Flexi Band and Signo tapes have satisfactory adhesion to the surface of Traspir 110 and Traspir Wand 110, painted and untreated wood, galvanized and stainless steel, painted and anodized aluminium and PVC.

Air tightness

The airtightness of the wind barrier makes it possible to fulfil any requirements regarding airtightness (n_{50}) given in the building regulations, and in the Norwegian passive house standards, before the vapour barrier is installed.

Resistance against tread through

Resistance against tread through is not evaluated for Traspir 110 and Traspir Wand 110 combined roofing underlay and wind barrier.

5. Environmental aspects

Substances hazardous to health and environment

Traspir 110 and Traspir Wand 110 contains no hazardous substances with priority in quantities that pose any increased risk for human health and environment. Chemicals with priority include CMR, PBT or vPvB substances.

Waste treatment/recycling

Traspir 110 and Traspir Wand 110 shall be sorted as plastic-based materials on the building/demolition site. The product shall be delivered to an authorized waste treatment plant for energy recovery.

Environmental declaration

No environmental declaration (EPD) has been worked out for Traspir 110 and Traspir Wand 110.

6. Special conditions for use and installation

Design considerations

Traspir 110 and Traspir Wand 110 can be laid directly over thermal insulation with no requirement for ventilation space from the bottom side. Examples of the products used in walls and roofs are shown in fig. 1 and fig. 2. See also Building Research Design Guide 525.866 *Undertak*.

Traspir 110 and Traspir Wand 110 is not designed for the use on sarking boards in roof constructions.

Traspir 110 and Traspir Wand 110 can be used at pitched roofs with a roof pitch of minimum 10 °.

Traspir 110 and Traspir Wand 110 shall not be in contact with chemical wood treatments, particularly when installing on rafters, counter battens or wood that are still wet from impregnation treatment.

Installation

Prior to the installation of Traspir 110 and Traspir Wand 110, ensure that all surfaces to be covered are firmly fixed, clean, dry and smooth.

As a wind barrier, Traspir 110 and Traspir Wand 110 shall be installed in accordance with the product guidelines and the principles described in Building Research Design Guides 523.255 *Bindingsverk av tre. Varmeisolering og tetting*, 525.101 *Isolerte skrå tretak med lufting mellom vindspærre og undertak*.

As a combined roof underlay and wind barrier, Traspir 110 and Traspir Wand 110 shall be mounted in accordance with the product guidelines and the principles described in Building Research Design Guide 525.102 *Isolerte skrå tretak med kombinert undertak og vindspærre*.

Traspir 110 and Traspir Wand 110 may be laid along or across the roof slope on top of the rafters and fixed with non-corrosive flat-headed nails or staples. Traspir 110 and Traspir Wand 110 should be laid loose, flat and without wrinkles.

Overlapping joints on studs or rafters must have a minimum of 150 mm overlap, depending on the pitch of the roof. Joints across the rafters shall be sealed with Rothoblaas Flexi Band or Signo tape.

Counter battens should be fastened with screws or nails with a maximum distance of 300 mm. It is recommended to use screws with plain shank on the part which penetrates the counter battens. For roof pitches above 18°, alternatively 3.1 mm hot galvanized square nails can be used or also grooved nails with a length of 2.5 times the thickness of the counter battens. To minimise the risk of water leakage, a nail point sealant can be mounted between the counter battens and the membrane. Recommended height of counter batten, depending on roof pitch and roof length are given in table 3.

The products must be covered as soon as possible after installation at roofs or walls, without unnecessary delay.

Table 3

Recommended height of counter battens (mm), depending on roof pitch and roof length

Roof pitch	Roof length (m) ¹⁾		
	7.5	10	15
15 – 30 °	36	36 + 36	48 + 48 ²⁾
31 – 40 °	30	36	36 + 23
≥ 41 °	23	36	36 + 23

¹⁾ Measured along the pitched roof from eave to ridge

²⁾ For large roof lengths and low roof pitches it's most practical to use 48 mm battens. Screws must be used to reach a good pinch.

Joints to other building components and penetrations

On roof Traspir 110 and Traspir Wand 110 shall be mounted with airtight connections to outer wall and with airtight overlap over ridges, eaves or valleys. Penetrations through roof (chimney, roof windows, pipes etc.), must also be air and watertight. Fig. 3 shows an example of a chimney penetration with Traspir 110 and Traspir Wand 110.

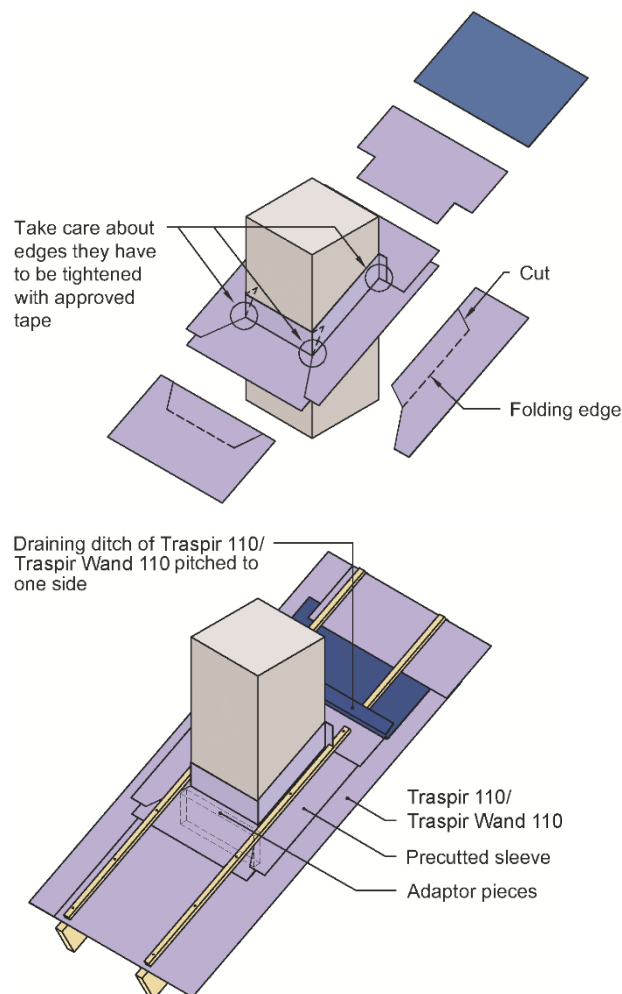


Fig. 2
Example of sealing around a chimney with Traspir 110 and Traspir Wand 110

Moisture in the building components

Wood-moisture in rafters, wall studs and all battens shall be maximum 20 % when the products are mounted. Shrinking in the wood shall not decrease the ability to clamp the overlaps of the membrane.

Transport and storage

Rolls should be stored flat on a clean, level surface, and kept away from sunlight.

7. Factory production control

Traspir 110 and Traspir Wand 110 are produced by JUTA a.s., Dukelská 417, Dvůr Králové nad Labem, 54401, Czech Republic.

The holder of the approval is responsible for the factory production control in order to ensure that Traspir 110 and Traspir Wand 110 are produced in accordance with the preconditions applying to this approval.

The manufacturing of Traspir 110 and Traspir Wand 110 is subject to continuous surveillance of the factory production control in accordance with the contract regarding SINTEF Technical Approval.

JUTA a.s. has a quality management system certified by Bureau Veritas according to ČSN EN ISO 9001:2015, certificate No. CZ008033-1, and an environmental management system certified according to ČSN EN ISO 14001:2015, certificate No. CZ008034-1.

8. Basis for the approval

The evaluation of Traspir 110, Traspir Wand 110, Rothoblaas Flexi Band and Signo are based on reports owned by the holder of the approval.

The evaluation of design and technical solutions are based on recommendations given in SINTEF Building Research Design Guides.

9. Marking

Each roll of Traspir 110 and Traspir Wand 110 is labeled with product name, manufacturer and production time.

The tape rolls are labeled with product name, manufacturer and batch number.

Traspir 110 and Traspir Wand 110 are CE-marked in accordance with EN 13859-1 and EN 13859-2.

The approval mark for SINTEF Technical Approval TG 20471 may also be used.

10. Liability

The holder/manufacturer has sole product responsibility according to existing law. Claims resulting from the use of the product cannot be brought against SINTEF beyond the provisions of Norwegian Standard NS 8402

for SINTEF



Hans Boye Skogstad
Approval Manager