

SINTEF Technical Approval

TG 20557

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 Amended: 16.05.2023
 Valid until 01.12.2025
 Provided listed on
www.sintefcertification.no

SINTEF confirms that

pro clima INTELLO PLUS

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

Moll bauökologische Produkte GmbH pro clima
 Rheinalstrasse 35 -43
 68723 Schwetzingen / Germany
www.proclima.com

2. Product description

pro clima INTELLO PLUS is a vapour barrier composed of three different layers. The functional layer of Polyethylene copolymer to the inside of the room and a polypropylene spunbond fleece to the outside. In between these layers is a reinforcement grid of non-woven polypropylene fabric. The single strings are spaced 10 mm apart. INTELLO PLUS is transparent/white with a light-green print of product name and assembling instructions. Dimensions and tolerances are given in table 1.

Accessories for assembling are mentioned in table 3.

Table 1
 Dimensions and tolerances for pro clima INTELLO PLUS

Property	Test method EN	Value	Unit	Tolerance
Width	1848-2	1,5 / 3,0	m	- 0 % / + 1,5 %
Length	1848-2	50 / 20	m	- 0 % / + 3 %
Thickness	1849-2	0,4	mm	± 0,15 mm
Area weight	1849-2	110	g/m ²	± 20 g/m ²

3. Fields of application

pro clima INTELLO PLUS can be used in floor, wall, and roof constructions in buildings with normally dry indoor climate which is ventilated in accordance with the requirements in TEK. pro clima INTELLO PLUS must not be used in rooms with high moisture content like swimming pools.

See examples for use in figures 1 - 3.

4. Properties

Material properties

Product characteristics for pro clima INTELLO PLUS are shown in table 2.

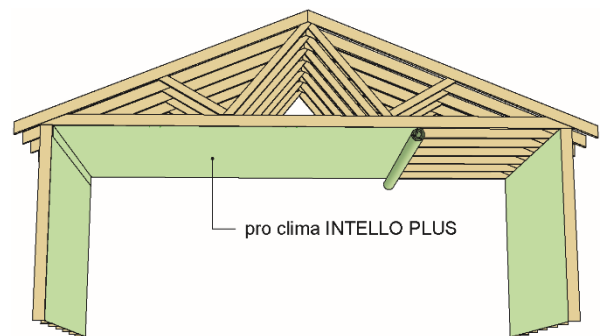


Fig. 1
 pro clima INTELLO PLUS mounted on exterior walls and beneath a roof truss against cold loft

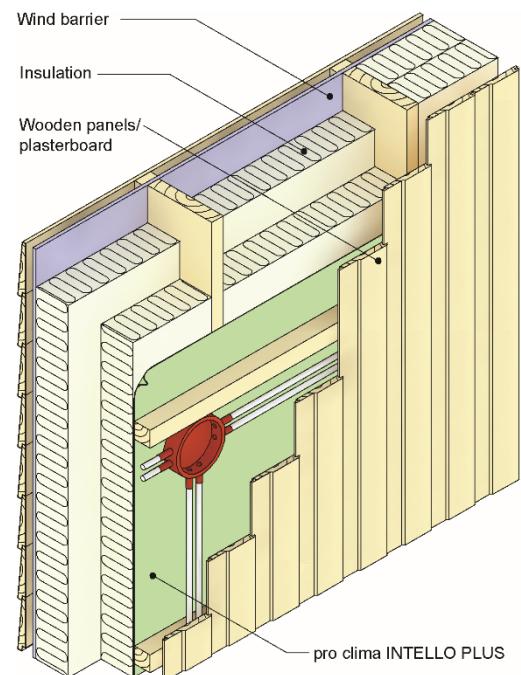


Fig. 2
 pro clima INTELLO PLUS mounted on exterior walls here shown without insulation in the installation layer and with timber panels

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Table 2
Product characteristics for pro clima INTELLO PLUS

Property	Test method EN	pro clima INTELLO PLUS		Unit
		DoP ¹⁾	Control limit ²⁾	
Foldability at low temperature	495-5	-	- 45	°C
Tensile strength	Long.: Trans.: 12311-2(A)	340 220	≥ 350 ≥ 260	N/50mm
Elongation	Long.: Trans.: 12311-2(A)	15 15	≥ 15 ≥ 15	%
Dimensional stability	Long: Trans.: 1107-2	-	≤ ± 1 ≤ ± 1	%
Water tightness	2kPa/24t 1928(A)	-	Tight	-
Vapour resistance s _d	ISO 12572	0,3 ± 40 % – 34 ± 20%	0,18 – 41 (depends on RH)	m
Tearing resistance	Long.: Trans.: 12310-1	200 200	≥ 200 ≥ 200	N
Puncturing	Static load 12730 (A)	-	≥ 10	kg

¹⁾ Manufacturers Declaration of Performance, DoP

²⁾ Control limit shows values, product has to satisfy during internal factory production control and audit testing

Table 3
Accessories for mounting of pro clima INTELLO PLUS

Accessory	Material / Description	Used for	Measures
TESCON® VANA	Acryl-tape with backing of PP	Tape for penetrations and as alternative overlap tightening	Width: 75 / 100 / 150 mm Roll length: 30 m
UNI TAPE	Acryl-tape with backing of PP	Tape for penetrations and as alternative overlap tightening	Width: 40 / 60 mm Roll length: 30 m

Safety in case of fire

pro clima INTELLO PLUS has a reaction to fire class E according to EN 13501-1.

Durability

pro clima INTELLO PLUS vapour barrier is assessed to have satisfactory durability when used as described in clause 6. The durability is evaluated based on laboratory tests after accelerated artificial ageing consisting UV radiation followed by heat ageing.

pro clima INTELLO PLUS is assessed not to have sufficient durability for use in alkaline environment.

TESCON® VANA and UNI TAPE’s adhesion properties are assessed to be satisfactory against pro clima INTELLO PLUS and galvanized steel. The durability is evaluated based on laboratory tests after accelerated artificial ageing consisting of UV radiation followed by heat ageing.

5. Environmental aspects

Substances hazardous to health and environment

pro clima INTELLO PLUS 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.

Effect on indoor environment

pro clima INTELLO PLUS The product is evaluated according to SINTEF Technical Approval – Health and Environmental Requirements version 09.05.2022. The product is not regarded as emitting any particles, gases or radiation that have a perceptible impact on the indoor climate, or to have any significant impact on health. The product meets the requirements in BREEAM-NOR v6.0, Emissions from building products according to Hea 02 Indoor air quality.

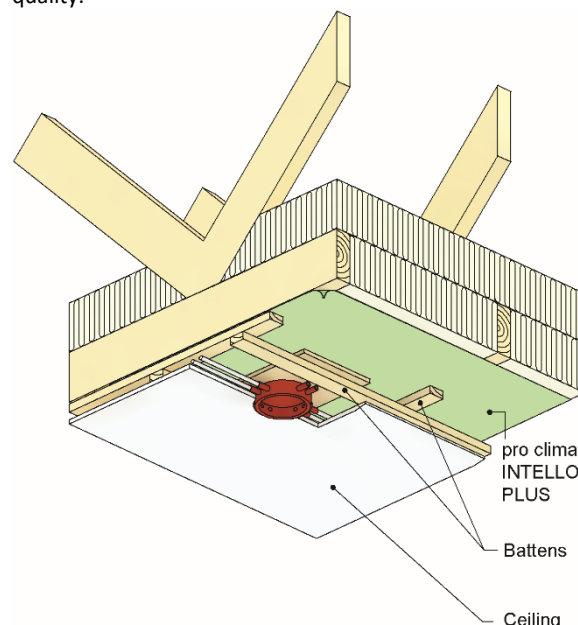


Fig. 2
pro clima INTELLO PLUS mounted beneath insulated bottom chord of roof truss with cold loft above. Ceiling of plasterboard.

Waste treatment/recycling

pro clima INTELLO PLUS shall be sorted as plastic-based materials or residual waste on the building/demolition site. The product shall be delivered to an authorized waste treatment plant for material or energy recovery.

Environmental declaration

No environmental declaration (EPD) has been worked out for pro clima INTELLO PLUS.

6. Special conditions for use and installation

Installation

Generally, vapour barriers should be installed on the inner, warm side of the construction. Continuously clamping of the joints, together with sealing of bushings is a prerequisite to prevent air leakage and water vapour transmission into the construction.

Installation shall be performed immediately after the construction has been insulated, and before the and before the heating of the building commences. The installation has to be done carefully for to avoid puncturing or rifts.

pro clima INTELLO PLUS must not be used in direct contact with concrete or other cement-based materials.

Generally, installation of vapour barrier shall be performed according to SINTEF Building Research Design Guides No.:

- 523.255 *Bindingsverk av tre. Varmeisolering og tetting*
- 525.101 *Isolerte skrå tretak med lufting mellom vindspærre og undertak*
- 525.102 *Isolerte skrå tretak med kombinert undertak og vindspærre*
- 525.106 *Skrå tretak med kaldt loft*
- 525.107 *Skrå tretak med oppholdsrom på deler av loftet*
- 527.204 *Bad og andre våtrom*

For easier to avoid damage from for example hidden electrical systems, the membrane can be installed behind internal battening. No thermal insulation shall be installed on the warm side of the vapour barrier.

Transport and storage

pro clima INTELLO PLUS shall be stored under roof or shall be protected in another way for exposition to direct weather

7. Factory production control

pro clima INTELLO PLUS is produced in Germany for Moll bauökologische Produkte GmbH pro clima, Rheintalstrasse 35 -43, 68723 Schwetzingen, Germany

The holder of the approval is responsible for the factory production control in order to ensure that pro clima INTELLO PLUS is produced in accordance with the preconditions applying to this approval.

The manufacturing of pro clima INTELLO PLUS is subject to continuous surveillance of the factory production control in accordance with the contract regarding SINTEF Technical Approval.

8. Basis for the approval

The evaluation of pro clima INTELLO PLUS is 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

Wrapping of each roll has to be marked with product name, product description and production number regarding traceability.

pro clima INTELLO PLUS is CE-marked in accordance with ETA 18/1146:2019.

The approval mark for SINTEF Technical Approval TG 20557 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