INTELLO® PLUS

Reinforced hydrosafe® high-performance vapour control membrane, suitable for all fibrous insulation materials



Technical data

	Material
Fleece	Polypropylene (50% recycled material)
Functional film	Polyethylene copolymer
Reinforcement	Polypropylene non-woven fabric

Property	Regulation	Value
Colour		White-translucent
Surface weight	EN 1849-2	110 g/m² ; 0.36 oz/ft²
Thickness	EN 1849-2	0.4 mm ; 16 mils
Water vapour resistance factor µ	EN 1931	35 000
sd value	EN 1931	14 m
sd value, humidity-variable	EN ISO 12572	0.25 - >25 m
g value	EN 1931	70 MN·s/g
g value, humidity-variable	EN ISO 12572	1.25 - >125 MN·s/g
Vapour permeance	ASTM E96-A	0.23 perms
Vapour permeance, humidity-variable	EN ISO 12572	<0.13 - 13 perms
Hydrosafe value (sd)	DIN 68800-2	2 m
Surface burning characteristics	ASTM E84	Class A (Flame Spread 0; Smoke development index 35)
Reaction to fire classification	EN 13501-1	E
Airtightness	EN 12114	Tested
Airtightness	ASTM E2357	<0.008 cfm/ft²
Airtightness	ASTM E2357	<0.05 L/(s·m²) @75 Pa
Tensile strength MD/CD	EN 13859-1 (A)	340 N/5 cm / 220 N/5 cm ; 39 lb/in / 25 lb/in
Elongation MD/CD	EN 13859-1 (A)	15% / 15%
Nail tear-resistance MD/CD	EN 13859-1 (B)	200 N / 200 N ; 45 lb / 45 lb
Durability after artificial ageing	ETA-18/1146	Passed
Temperature resistance, permanent	EN 1109, EN 1296, EN 1297	-40 °C to 80 °C ; -40 °F to 176 °F
Thermal conductivity		0.04 W/(m·K) ; 0.3 BTU·in/(h·ft²·°F)
Passive House Certification	Passivhaus Institut	phA
CE labelling	ETA-18/1146	Yes

Areas of application

Vapour control (alternate terms: vapour check or retarder) membrane for use on roofs, walls, ceilings and floors on structures that are open or closed to diffusion on the exterior, e.g. flat/pitched roofs and green roofs, after appropriate design calculations have been carried out.

Supply forms

Art. no.	Length	Width	Folded	Contents	Weight	Sales unit	Container	GTIN
10093	20 m	1.5 m		30 m²	4 kg	1	42	4026639011237
10092	50 m	1.5 m		75 m²	9 kg	1	20	4026639011244
10076	50 m	3 m		150 m²	18 kg	1	20	4026639011992
12222	50 m	3 m	✓	150 m²	18 kg	1	20	4026639122223

pro clima®

Advantages

- ✔ Best possible protection against moisture damage to structures and mould because this product is humidity-variable with a variation of a factor of over 100
- ✔ Can be combined with all fibrous insulation materials (including blown-in insulation)
- ✔ Long-term protection: performance tested and certified by independent testing authority (ETA-18/1146)
- ✔ Well-protected winter building sites thanks to hydrosafe® behaviour
- ✔ Test winner in the German 'Stiftung Warentest' product test in April 2012
- ✔ Easy to work with: dimensionally stable, no splitting or tear propagation
- ✔ Excellent values in hazardous substance testing, has been tested according to the ISO 16000 evaluation scheme

General conditions

Where possible, INTELLO PLUS should be installed in such a way that adhesion can be carried out using single-sided adhesive tape on the smooth (printed) side of the sheeting. It should be installed taut and without slack either in parallel with or perpendicular to the supporting structure, e.g. the rafters. In the case of horizontal installation (perpendicular to the supporting structure), the separation distance of the supporting structure is limited to a maximum of 100 cm (3').

After installation, perpendicular battens on the inside at a separation distance of a maximum of 50 cm (1' 8") must be fitted to carry the weight of the insulation material.

If regular tensile loads on adhesive tape bonds are to be expected – for example, due to the weight of the insulation material – when using mat or panel-shaped insulation materials, an additional supporting batten should be fitted over the overlap sealing. When attaching the membranes in the case of mat or panel-shaped insulation materials, a maximum separation distance of 10 to 15 cm (4" to 6") applies for the fastening staples, which must be at least 10 mm (3/8") wide by 8 mm (5/16") long. The overlaps between the membrane strips must be approx. 8 to 10 cm (3" to 4").

Airtight seals can only be achieved on vapour control membranes that have been laid without folds or creases. Ventilate regularly to prevent excessive humidity (e.g. during the construction phase). Occasional, intermittent ventilation is not sufficient to remove large quantities of moisture due to construction work from a building; use a dryer if necessary.

As a consequence of their humidity-variable properties, humidity-variable vapour control membranes are generally subject to swelling and contraction when they absorb or release moisture. This particularly applies in the case of major changes in the ambient humidity (e.g. after wet work has been carried out or after strong drying). For this reason, it is important to provide sufficient ventilation to remove high levels of air humidity, to use secure mechanical fastening by means of staples and support battens, and to provide sufficient slack to accommodate relative motion.

To prevent condensation formation, INTELLO PLUS should be sealed and taped in an airtight manner immediately after the installation of mat or panel-shaped thermal insulation materials. This particularly applies when working in winter.

Additional instructions for blown-in insulation materials

INTELLO PLUS can also be used as a boundary layer for blown-in insulation materials of all types. A reinforcement structure ensures that there is little expansion during the blowing-in process. Installation in parallel with the supporting structure has the advantage that the joint will be on a solid base and is protected by this base.

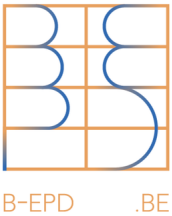
The separation distance between the staples used to fasten the membrane strips must be a maximum of 5 to 10 cm (2" to 4"). Staples should be oriented parallel with construction timber so that membranes do not tear at the staples when insulation material is being blown in. If installation is carried out perpendicular to the supporting structure, a supporting batten should be fitted directly over the membrane strip overlap with its airtight sealing in order to avoid tensile loading on the adhesive bond.

When working in cold outdoor climates, the blown-in insulation material should be inserted immediately after installation of INTELLO PLUS. This will protect the membrane against condensation formation.


ETA
CE
European Technical Assessment
ETA – 18/1146

Declare.


EPD
verified


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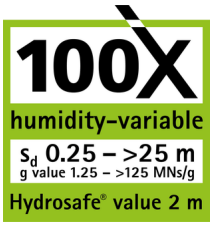

ICC
ES


INTELLO PLUS
– sheet vapour barrier
Complies with NATIONAL STANDARD OF CANADA
CAN/CGSB-51.33-M89
INTELLO PLUS
– pare-vapeur enfeuille
Copnforme à la NORME NATIONALE DU CANADA
CAN/CGSB-51.33-M89


NSAI
Agrément
pro clima Intelligent Airtight System
CERT No. 07/0297


BBA
APPROVAL
INSPECTION
TESTING
CERTIFICATION
CERTIFICATE 14/5155


phA
CERTIFIED
COMPONENT
Passive House Institute


100X
humidity-variable
s_d 0.25 – >25 m
g value 1.25 – >125 MNs/g
Hydrosafe® value 2 m


NBS


Tested for hazardous substances according to
ISO 16000


BRANZ Appraised
Appraisal No. 1149


UK
CA


Made in Germany
developed and produced by
pro clima

The applications and conditions described here are based on current research findings and practical experience. We reserve the right to change the recommended application designs and installation methods and to develop and thus change the properties and quality of individual products. We would be glad to inform you about the current state of engineering knowledge at the time that your installation is carried out.

The planning documentation that is available from pro clima provides further information about installation methods and design details. If you have questions, please contact pro clima Technical Support in Germany at +49 6202 278245.

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