



## Technical data

		Substance
Fleece		Polypropylene
Membrane		Polyethylene copolymer
Reinforcement		Polypropylene non-woven fabric
Attribute	Regulation	Value
Colour		white-transparent
Surface weight	EN 1849-2	110 g/m <sup>2</sup> ; 0.36 oz/ft <sup>2</sup>
Thickness	EN 1849-2	0.4 mm ; 16 mils
Water vapor resistance factor $\mu$	EN 1931	35 000
sd-value	EN 1931	14 m
sd-value humidity variable	EN ISO 12572	0.25 - >25 m
g-value		70 MN-s/g
g-value humidity variable		1.25 - >125 MN-s/g
Vapour permeance	ASTM E96-A	0.23 US perms
Vapour permeance humidity variable	EN ISO 12572	< 0.13 - 13 US perms
Hydrosafe value (sd)	DIN 68800-2	2 m
Surface burning characteristics	ASTM E84	Class A (Flame Spread 0; Smoke development index 35)
Fire rating	EN 13501-1	E
Airtightness	EN 12114	tested
Airtightness	ASTM E2178	$\leq 0.004$ cfm/ft <sup>2</sup>
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/5 cm / 200 N/5 cm ; 23 lb/in / 23 lb/in
Durability after artificial ageing	ETA-18/1146	passed
Temperature resistance		permanent -40 °C to 80 °C ; -40 °F to 176 °F
Thermal conductivity		2.3 W/(m·K) ; 16 BTU-in/(h·ft <sup>2</sup> ·F)
CE labelling	ETA-18/1146	yes

## Application

For use on roofs, walls, ceilings and floors on structures that are open or closed to diffusion on the exterior, e.g. flat/steep roofs and green roofs, after appropriate design calculations.

## Advantages

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

The information provided here is based on practical experience and the current state of knowledge. We reserve the right to make changes to the recommended designs and processing or to make alterations due to technical developments and associated improvements in the quality of our products. We would be happy to inform you of the current technical state of the art at the time you use our products.

Further information about the application and construction can be found in the pro clima planning documentation. For queries please call the pro clima technical hotline on +49 (0)6202 278245.

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## General conditions

Where possible, INTELLO PLUS are installed in such a way that adhesion can be carried out using single-sided adhesive tape on the smooth (printed) side of the sheeting. They can 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 bonding. 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 and 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 rush/inrush ventilation is not adequate to quickly evacuate large amounts of construction-related humidity from the building. Use a dryer if necessary.

To prevent condensation, INTELLO should be stuck down so that it is airtight immediately after installing the thermal insulation. 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 bonding 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.



Tested for hazardous substances according to



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