INTELLO® X

All-round hydrosafe® high-performance vapour control membrane



Technical data

	Material
Protective and covering fleece	Polypropylene
Functional film	Polyethylene copolymer

Property	Regulation	Value
Colour		Light grey
Surface weight	EN 1849-2	130 g/m² ; 0.43 oz/ft²
Thickness	EN 1849-2	0.45 mm ; 18 mils
Water vapour resistance factor µ	EN 1931	31 100
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
Reaction to fire classification	EN 13501-1	E
Surface burning characteristics	ASTM E84	Class A (Flame Spread 0; Smoke development index 105)
Outdoor exposure		2 months
Outdoor exposure on retrofits betw. 2 insulation layers		14 days ; 7 days at ≤10 °C (≤50 °F)
UV resistance		Can be permanently exposed to diffuse UV light
Watertight joints with 'connect' adhesive strips or TESCON tape	EN 13859-1	W1
Watertightness to liquid water	EN 1928	W1
Water column	EN ISO 811	> 2 500 mm ; > 8' 2"
Tensile strength MD/CD	EN 12311-2	250 N/5 cm / 170 N/5 cm ; 29 lb/in / 19 lb/in
Elongation MD/CD	EN 12311-2	60% / 60%
Nail tear-resistance MD/CD	EN 12310-1	120 N / 120 N ; 27 lbf / 27 lbf
Durability after artificial ageing	EN 1296	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	EN 13984	Yes

Areas of application

Vapour control (alternate terms: vapour check or retarder) membrane for use on the inside of insulation installed between rafters or wall framework, in combination with fibrous insulation mats and boards. Can be installed directly on top of sheathing for use underneath exterior insulation, also in combination with blown-in insulation materials.

This membrane can be permanently exposed to diffuse UV light – e.g. in areas without inner cladding.

In the case of roof retrofit work from the outside and installation between two layers of insulation, the choice of insulation materials for the two layers is limited to mineral or rock wool. The thickness of the external mineral wool insulation needs to be calculated on a project-specific basis; please contact Technical Support at pro clima in Germany for assistance.

This membrane can be used on building structures that are diffusion-open to the outside or are diffusion-tight, e.g. pitched, flat or green roofs, after appropriate design calculations have been carried out.

Supply forms

Art. no.	Length	Width	Contents	Weight	Sales unit	Container	GTIN
1AR03049	50 m	1.5 m	75 m²	12 kg	1	20	4026639230492
1AR03858	50 m	3 m	150 m²	24 kg	1	20	4026639238580

Advantages

- ✔ Excellent protection against mould and moisture damage to structures thanks to humidity-variable diffusion resistance
- ✔ Easier handling: can be used with insulation installed between rafters/framework, underneath external insulation or – in the case of retrofitting from the outside – between two layers of mineral wool insulation
- ✔ Protects building structures against weathering during the construction phase for roof pitches of 10° (2.1:12) and higher
- ✔ Well-protected winter building sites thanks to hydrosafe® behaviour
- ✔ Excellent values in hazardous substance testing, has been tested according to the ISO 16000 evaluation scheme

General conditions

INTELLO X is to be installed with the printed side facing the installation technician. The membrane is to be installed horizontally (parallel to the eave) in a taut manner.

Airtight seals can only be achieved on vapour control membranes that have been fitted with no folds or creases. Ventilate regularly and systematically to prevent the build-up of 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.

Taped and adhesive joints with the rear side of the membrane are unproblematic: In certain cases, taped or adhesive joints on the rear are necessary, for example when sealing around skylights if the membrane is installed from the exterior.

To avoid condensation formation, the thermal insulation should be installed immediately after the airtight installation of INTELLO X. This applies particularly to work carried out in winter.

Fastening

Overlap the membranes by at least 10 cm (4″). Use fastening staples that are at least 10 mm (3/8″) wide by 8 mm (5/16″) long to attach the membranes. The membranes can only be fastened in a protected manner in the overlap area. The maximum distance between fasteners is 10 to 15 cm (4″ - 6″). Fasteners may not be applied in areas where water runs off in a collected manner (e.g. in roof valleys).
If exposure to the elements is planned, it is recommended to provide additional mechanical support for the membranes (e.g. with counter battens). TESCON NAIDECK mono adheres to counter battens, seals nail holes and improves the level of rain protection.

EPD verified

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

Tested for hazardous substances according to ISO 16000

CE 21 EN 13984

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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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