

# INTELLO PLUS



High performance smart vapor retarder with reinforcing layer for dense-pack insulation

## BENEFITS

Provides structural systems and highly insulated assemblies a previously unachievable degree of protection from moisture damages, even in challenging assemblies and/or climatic conditions. Its vapor variable properties provide a high level of protection against moisture induced failures in challenging conditions:

- Vapor closed flat / green-roofs
- Unvented pitched roofs (asphalt shingles, OSB sheathing, valleys covered by ice & water shield)
- Mixed humid climates with cold winters and air-conditioning requirements in summer
- Extreme climates such as in high mountain regions or very cold/arctic conditions

INTELLO remains vapor retarding up to 70% relative humidity. If such a high humidity level is exceeded, caused by reversed summer time vapor drive or other moisture ingress, INTELLO rapidly becomes vapor permeable and allows inward drying of the enclosure.

## PRODUCT PROPERTIES

- Intelligent vapor retarding membrane with best in class protection of fibrous/vapor open thermal insulation in roofs, walls and floors.
- International Living Future Institute Declare product.
- Largest vapor variability available:
  - In dry winter conditions < 0.13 perm (Sd value 25m)
  - In summer > 13.2 perm (Sd value 0.25m) maximizing inward drying potential
- Offers insulated assemblies best protection against damages and mold, even in case of unforeseen moisture entry.
- Durable airtight layer, part of ProClima's Intelligent Airtight System.
- Fleece layer protects smart vapor retarding layer during installation over (rough / green) wood.
- Very minimal bulging when used as dense-pack membrane because of reinforcement grid.
- Suitable for all types of batts (unfaced fiberglass, mineral wool, cotton, sheepswool, hemp, flax, etc), as well as for all types of insulation boards (wood fiber, mineral wool, glass wool, straw, etc)

	5' Short (10091)	5' Standard (10092)	10' Wide (12222)
Roll Width	59 1/16" (1.5m)	59 1/16" (1.5m)	118 1/8" (3m) Folded on roll 4" application offset
Roll Length	65' 7" (20m)	164' 1/2" (50m)	164' 1/2" (50m)
Roll Area	323 SF (30 m2)	807 SF (75 m2)	1614 SF (150 m2)

**475 High Performance Building Supply**

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# INTELLO PLUS

TECHNICAL SPECS		
Cover	Polypropylene microfiber fleece	
Membrane	vapor-variable polyethylene copolymer	
Reinforcing	Polypropylene non-woven fabric	
Color	Translucent white	
Attribute	Norm	Value
Weight	DIN EN 1849-2	0.36 oz/sf (110 g/m <sup>2</sup> - ±5g/m <sup>2</sup> )
Thickness	DIN EN 1849-2	16 mils (0.4 mm - ±0.1mm)
Air Permeance	ASTM E2178	0.00005 cfm/ft <sup>2</sup>
Airtightness	ASTM E2357	<0.008 cfm/ft <sup>2</sup> at 75 Pa
		<0.05 L/sm <sup>2</sup> at 75 Pa
Average vapor resistance	DIN EN 1931	perm 0.44 (sd-value 7.50m ±0.25m)
Vapor Variability	ASTM E96 Procedure A (dry cup)	0.2 perm
	ASTM E96 Procedure B (wet cup)	6 perm
Vapor Permeance	EN ISO 12572	Perm rate from 13 to <0.13 (Sd value from 0.25m to >25m)
Surface Burning Characteristic	ASTM E84	Flamespread: 0 Smoke development: 35 Class A fire class material
Fire class	DIN EN 13501-1	E
Tensile strength	MD/CD EN 13859-1 (A)	340 N/5 cm / 220 N/5 cm ; 39 lb/in / 25 lb/in
Elongation at break	MD/CD DIN EN 13859-1	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 / artificial age test	DIN EN 1296/1297	passed
Temperature resistance		-40 F° to 176 F° / -40 C° to 80 C°
Thermal conductivity		0.85 hr.ft <sup>2</sup> °F/BTU.in (0.17 W/mK)



CODE COMPLIANCE	
IRC 2015 - R702.7	Class II vapor retarder
IBC 2015 - 1405.3.1	Class II vapor retarder
NBC 2015/2010 - 9.25.4.2 Vapour Barrier Materials	Passed CAN/CGSB 51.33
NBC 2015 - 5.4.1 Air Barrier Systems	Passed air leakage <0.02 L/(s·m <sup>2</sup> ) @75 Pa (ASTM E2178)
NBC 2015 - 9.36.2.9 Airtightness	Passed air leakage <0.2 L/(s·m <sup>2</sup> ) @75 Pa (ASTM E2357)

## APPLICATION

Follow the INTELLO PLUS application guide found on [foursevenfive.com](http://foursevenfive.com). For all connections and overlaps use system components of ProClima’s Intelligent Airtight System. Use TESCON VANA for overlaps, TESCON PROFIL for corner connections, CONTEGA HF to adhere to rough or uneven substrates, ROFLEX for pipes penetrations, etc. INTELLO PLUS can be used as a vapor retarder and airtightness membrane for all externally vapor permeable membranes, e.g. with roof underlay (pro clima SOLITEX MENTO), wood fibreboard, or vented sheathing. Additional suitable for a high level of protection against moisture induced failures in structurally challenging constructions such as diffusion-resistant flat/pitched roofs and for walls or roof with vapor retarding exterior sheathing (OSB or plywood).

## GENERAL CONDITIONS

Pro Clima INTELLO PLUS should be laid with the printed side facing the installer. It can be laid perpendicular to the sub-structure or parallel along it (such as along the rafters). Membrane should be applied taut and without sags or creases. The maximum on center spacing of the structure behind INTELLO PLUS is 40”/100 cm. After membrane is applied, battens should be installed through the INTELLO PLUS into the structure to support the weight of the blown. The battens should be less than 20” on center (50 cm).

If long term tensile forces on the taped overlaps are expected by dense packed insulation’s weight, an additional supporting batten should be placed on each of those overlaps. Alternatively, the taped overlap can be reinforced with TESCON VANA tape applied at right angles to the overlap every 12”/30 cm.

**Please note:** Airtight seals can only be achieved on vapor control membranes that have been laid without folds or creases. Prevent excessive interior humidity (e.g. during the construction phase) and occupation by providing sufficient ventilation. Natural ventilation is in general not adequate to quickly evacuate large amounts of construction related humidity (Curing concrete, tiling, drywall compounding, plastering etc). Use a dehumidifier if necessary.

To prevent condensation in cavities, INTELLO PLUS should be taped and sealed airtightly immediately after installing the thermal insulation. This particularly applies when working in winter.



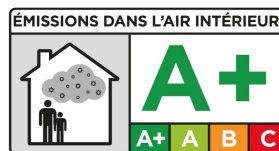
## GENERAL CONDITIONS (continued)

Additionally for blown-in insulation: Benefit of applying membrane parallel to substructure when installing dense packed insulation afterwards, is that all overlaps are mechanically fastened and secured to structural elements.

## FURTHER INFORMATION

Further information is given in the study "Calculating potential freedom from structural damage of thermal insulation structures in timber-built and steel systems" found at:

[http://int.proclima.com/media/downloads/study\\_english.pdf](http://int.proclima.com/media/downloads/study_english.pdf)



\*Information sur le niveau d'émission de substances volatiles dans l'air intérieur, présentant un risque de toxicité par inhalation, sur une échelle de classe allant de A+ (très faibles émissions) à C (fortes émissions)