SmartVap 100

Air barrier with variable vapour diffusion resistance

Product Description

ProctorPassive SmartVap 100 (SmartVap) is a two layer AS/NZS 4200.1 compliant light duty air barrier and variable vapour diffusion resistance retarder.

Applications

When installed as a continuous layer, SmartVap will form an air tight layer, improving the efficacy of ventilation systems and thermal efficiency of the building enclosure. The effective management of air and vapour passage through wall, ceiling and floor assemblies can help protect the building fabric and insulation from condensation and related problems such as mould, timber rot, corrosion and loss of thermal resistance.

SmartVap should not be used on the exterior side of insulation in cold and temperate climates as an alternative to a vapour permeable sarking, where there is a risk that condensation will form on the interior face of the retarder.

Variable vapour diffusion resistance

The functional layer of SmartVap is a polyamide film. Such films passively adjust vapour diffusion resistance depending on the humidity where located. The polyamide absorbs water vapour from the air, opening the molecular pores thus adjusting vapour diffusion resistance according to ambient humidity conditions.

SmartVap is not "smart" enough to tell what season it is, and it would be simplistic to claim vapour tight in winter and vapour open in summer. The vapour resistance of SmartVap is not seasonal, but is influenced by the relative humidity on both sides of the membrane where it is located, whatever the season.

When the ambient humidity is low the diffusion resistance is higher. When the ambient humidity is high, the diffusion resistance is lower. This functionality can assist the building fabric to dry towards the interior when relative humidity is higher, and vapour pressure is lower on the interior side of the membrane.

Installation

SmartVap should be installed in accordance with the supplied installation guide.

Durability

Although SmartVap can be used as temporary protection during construction, it can not be used as a primary waterproofing membrane. The product may be damaged by careless handling, high winds or vandalism, and should not be left uncovered for longer than is absolutely necessary. Any damaged areas should be replaced before completion.

Ensure that SmartVap is covered as soon as possible, and **not left exposed to UV for longer than 4 weeks**. ProctorPassive SmartVap is not to be used in installations where it could be exposed to long term UV radiation.

Benefits

- Air tight
- Semi-translucent for ease of installation
- Variable water vapour diffusion resistance
- High water resistance
- Non perforated
- Non conductive
- Lightweight and easy to handle
- AS/NZS 4200.1 testing and compliance

Health and Safety

Information on any known health risks on our products is listed in the Material Safety Data Sheets available from Proctor Group Australia. All proper safety measures should be taken during installation and all relevant OH&S and statutory regulations must be followed. ProctorPassive SmartVap has no anti-slip coating so may be slippery when wet. Carelessly discarded packaging also represents a slip hazard.

Product Performance

The details supplied here are based upon good practice and currently available information and should be read in conjunction with the most up to date product user guide. Users are advised to make their own determination as to the suitability of this information in relation to their particular purpose and specific requirements. Please contact DriStud Technical Team to discuss your project and any particular technical enquires.

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SMARTVAP

Technical Data

Properties	Test method	Result
Duty Classification	AS/NZS 4200.1:2017	Light Wall
Vapour Permeability	ASTM E96 (Procedure B) Wet cup 23˚C/ 50% RH	0.55µg/N.s
Vapour Resistance	ASTM E96 (Procedure B)	1.83MN.s/g
Vapour Barrier Classification	AS/NZS 4200.1:2017	Vapour Permeable: Class 3
Emittance	AS/NZS 4201.5	Non-reflective
Water Barrier	AS/NZS 4201.4	High
Absorbency	AS/NZS 4201.6	Unclassified
Resistance to Dry De-Lamination	AS/NZ 4201.1	Pass
Resistance to Wet De-Lamination	AS/NZ 4201.2	Pass
Shrinkage	AS/NZ 4201.3	< ±0.5%
Burst Strength	AS 2001.2.19-1988	>200N
Air Permeability	EN 12114:2001	< 0.02 m³/(h.m².50Pa)
Air Control Classification	AS/NZS 4200.1, ISO 5636-5	Air Barrier (≥ 0.1 MNs/m3)
Flammability Index	AS/NZ 1530 Part 2	≤ 5
Tensile Strength	AS 1301.448	MD: 2.5kN/m CD: 1.9kN/m
Edge Tear Resistance	TAPPI T470	MD: 134N CD: 104N
European Vapour Resistance Testing	EN 1931 B Dry Cup 23°C RH 75%	10.5 MNs/g
	EN 12572 (A) Dry Cup 23°C RH 50%	11.25 MNs/g
	EN 12572 (C) Wet Cup 23°C RH 93/50%	1.15 MNs/g
	Sd value range for film	0.15m to 5m

Sample Specification

Vapour and air retarder should be ProctorPassive SmartVap 100 vapour and air retarder membrane, tested to AS/NZS 4200.1:1994 standards, installed in accordance with the product user guide.

- Duty classification: Light Wall
- Air permeance (EN12114: <0.02 m³/(h.m².50Pa)
- Emittance: Non-reflective
- Flammability Index: Low
- Non conductive and not subject to corrosion

Dimensions & Packaging

Product	Width	Length	Roll Area	Roll Coverage (100mm overlaps)	Roll weight	Rolls per pallet
ProctorPassive SmartVap100	1,500mm	30m	45m²	42m²	4.7kg	72 rolls

Accessories

Application	Product	Width	Length (m)
Sealing joins and tears	ProctorPassive Air Barrier (AB) Tape	60mm	25m
Temporary adhesion to steel frame	ProctorGeo Duo Tape (double sided)	24mm	50m