FIREFLY VapourFlex

Non Combustible | Vapour Permeable Sarking
Product Technical Statement

Material Description

FIREFLY VapourFlex Non-Combustible Sarking is an extra heavy duty, vapour permeable, pliable membrane vapour barrier consisting of a layer of woven glass fabric with a hydrophobic surface. FIREFLY VapourFlex meets the Deemed to Satisfy (DtS) provisions of the NCC Volume 1 (2022) and comes with a 25 year warranty. Available in 1250 mm x 50 m, thickness 0.2 mm, 62.5m² per roll, 14.5kg weight per roll.

Applications

FIREFLY VapourFlex represents a cutting-edge vapour permeable membrane for walls and roofs, fabricated to serve as a pliable, non-combustible barrier in Type A and B fire-resistant constructions, as well as across various construction types where superior passive fire safety, water ingress prevention and vapour permeability is desired.

Its advanced hydrophobic treatment blocks liquid water whilst allowing water vapour diffusion within the wall structure.

Constructed with non-combustible Fortaglas weave, it boasts an Extra Heavy Duty strength classification, ensuring resilience against punctures and maintaining ember protection for all BAL zones.

Material Properties

Properties	Units	Values	Test Method
Thickness	mm	0.18	ASTM D1777
Weight	g/m²	260	BS 3424: Part 3
Colour		Single sided silver	
PTFE	%	18	BS 3424: Part 3
Surface Cracking		#N/A	ASTM E1209-05
Typical Temperature Range	°C	-72 to +260	
Maximum Exposure duration (before cladding)		90 days	

Performance Specifications

Performance Specification	Units	Values	Test Method
Edge tearing resistance	AS 4200.1 (2017), Clause 5.3.2.3 (TAPPI T470)	Machine Direction - 394 N Lateral Direction - 326 N	AWTA 23-004857
Tensile strength of paper	AS 1301.448s (2007)	Machine Direction - 38.0 N Lateral Direction - 29.0 N	AWTA 23-004857
Duty classification	AS 4200.1 (2017) & AS 1301.448s (2007)	Extra Heavy	AWTA 23-004857
Water control classification	AS 4201.4 (1994)	Water Barrier	AWTA 23-004857
Moisture Shrinkage	AS 4201.3 (1994)	0%	AWTA 24-000613
Resistance to dry delamination	AS 4201.1 (1994)	Pass	AWTA 24-000613
Resistance to wet delamination	AS 4201.2 (1994)	Pass	AWTA 24-000613
Vapour control classification	ASTM E96 (2016), Wet Cup	2.6 μg/N.s (Class 4)	AWTA 23-004857
Surface water absorbency	AS 4201.6 (1994)	10.4 g.m² (low)	AWTA 24-001276
Emittance value	AS 4201.5 (1994)	Silver inner side 0.76 Outer side 0.89	AWTA 23-004857
Emittance classification	AS 4201.5 (1994)	Non Reflective	AWTA 23-004857
Electrical conductivity		Electrically Non-Conductive	AWTA 24-000613
Flammability classification	AS 1530.2 (1993)	Flammability Index 1 (Low)	AWTA 24-000612
Non-combustibility	AS 1530.1 (1994)	Glass Fabric Non-Combustible	CSIRO FNC11220
Fire Hazard properties	AS1530.3 (1999)	Ignitability Index - 0 Spread of Flame Index - 0 Heat Evolved Index - 0 Smoke Developed Index - 0	AWTA 24-001277
Fire Hazard properties	AS 5637.1 (2015), Cone Calormeter Method (AS 3837)	Av. Heat Release: Failure to ignite (FTI) Group Number 1	AWTA 24-001278

National Construction Code Volume 1 (2022)

FIREFLY VapourFlex meets the Deemed to Satisfy (DtS) provisions in the following clauses:

F3D3 Sarking

Sarking-type material used for weatherproofing of roofs and walls must comply with AS 4200.1 and AS 4200.2

F8D3 External wall construction

1. Where a pliable building membrane is installed in an external wall, it must -
   a. comply with AS 4200.1; and
   b. be installed in accordance with AS 4200.2; and
   c. be located on the exterior side of the primary insulation layer of wall assemblies that form the external envelope of a building.
2. Where a pliable building membrane, sarking-type material or insulation layer is installed on the exterior side of the primary insulation layer of an external wall it must have a vapour permeance of not less than -
   a. in climate zones 4 and 5, 0.143 µg/N.s; and
   b. in climate zones 6, 7 and 8, 1.14 µg/N.s

C2D10 (6) (f) Flammability classification

Sarking-type materials that do not exceed 1 mm in thickness and have a Flammability Index not greater than 5.

National Construction Code Volume 1 (2019)

FIREFLY VapourFlex meets the Deemed to Satisfy (DtS) provisions in the following clauses:

F1.6 Sarking

Sarking-type material used for weatherproofing of roofs and walls must comply with ASS 4200.1 and (AS 4200.2)

F6.2 Pliable building membrane

a. Where a pliable building membrane is installed in an external wall, it must -
   I) comply with AS/NZS 4200.1; and
   ii) be installed in accordance with AS 4200.2; and
   iii) be a vapour permeable membrane for climate zones 6, 7 and 8; and
   iv) be located on the exterior side of the primary insulation layer of wall assemblies that form the external envelope of a building.

C1.9 (3) (vi) Flammability classification

Sarking-type materials that do not exceed 1 mm in thickness and have a Flammability Index not greater than 5.

General Installation Notes

- FIREFLY VapourFlex sarking is not designed to withstand prolonged or direct exposure to UV or the weather. External cladding materials must be applied within 90 days of installation.
- The product shall be installed in accordance with AS/NZS 4200.2 (1994) Pliable Building Membranes & Underlays, Part 2 Installation Requirements - with the silver surface facing inwards.
- Installation in horizontal runs across the wall starting at the bottom plate. To form a continuous membrane over the entire area of the wall successive runs shall overlap the lower run by 150 mm.
    - For timber framed wall applications, attach FIREFLY VapourFlex to framing members using either battens or hammer tacker with 10 mm staples at maximum 600 mm centres. At least one fastener per stud shall be provided at laps.
    - For steel framed wall applications, attach FIREFLY VapourFlex to framing members using 12 mm, 8 g button head self drilling screws at maximum 600 mm centres. At least one fastener per stud shall be provided at laps.