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## DuPont™ AirGuard® A2 FR – Fire Retardant AVCL installation

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**NBS: P10 310    Also: H20, H21, H30, H31, H40, H51, H92, K10, K21 M30**

Information correct as at Oct 21<sup>st</sup> 2021

**IMPORTANT:** This installation document must be read in its entirety to fully understand the parameters of the fire-retardant membrane system and its compliance with current fire legislation. All materials and components including fixings, sealant products and underlying substrates must be taken into consideration to ensure the required fire classification is applicable and the entire building element provides the required protection. Specifiers/users must familiarise themselves with their regional regulatory guidance documents to become aware of the requirements and any variations that may affect the use of these products.

Please pay particular attention to the A2 Classification Notes at the end of this document.

For additional information on our product(s) and guidance on how to use them you may wish to refer to our step by step Installation Guide and videos. This and other useful information is on our web site:

[www.building.dupont.co.uk](http://www.building.dupont.co.uk)

For help with a project please contact the DuPont Building Knowledge Centre. (Contact details can be found at the end of this Installation Sheet).

**Air/Vapour Control Layer (AVCL)** to EN 13984:2013 shall be **DuPont™ AirGuard® A2 FR** as supplied by DuPont Performance Building Solutions, Bristol & Bath Science Park, Dirac Crescent, Emersons Green, Bristol. UK. BS16 7FR

### Storage

Rolls of DuPont™ AirGuard® A2 FR should be stored palletised or on their sides on a smooth clean surface, under cover and protected from direct sunlight.

### Damage – Mitigation & Repair

The membrane should be handled with care and not left exposed to high winds in an unsupported (free-hanging) condition. Small tears and punctures can be repaired with DuPont™ AirGuard® FR System Tape (1310FR), but large areas of damage should be replaced with new material. For more information please contact the UK BKC (details below).

### Orientation

**DuPont™ AirGuard® A2 FR should be positioned on the warm side of the insulation within the building envelope, with the reflective foil surface facing the installer.**

### Wall applications (please see A2 Classification Notes)

DuPont™ AirGuard® A2 FR should be laid horizontally, with 100mm laps. For optimum vapour control and airtightness, all horizontal and vertical laps should be sealed with DuPont™ AirGuard® FR System Tape.

Note: DuPont™ AirGuard® A2 FR in combination with DuPont™ AirGuard® FR System Tape achieves the A2-s1,d0 fire classification to EN 13501-1. **Please note: The tape is not hand tearable and a cutting tool will be required.**

### Temporary fixing

Initial (temporary) fixing of DuPont™ AirGuard® A2 FR may be made with continuous strips of Tyvek® Double Sided (acrylic) Tape applied to the support. Membrane must be permanently fixed as soon as possible, using one of the following methods:

#### Fixing - to light gauge steel framing (SFS): Option 1 (preferred)

DuPont™ AirGuard® A2 FR may be permanently secured with steel drywall channels or lining brackets fixed over the membrane. This will create a service void behind the internal (plasterboard) lining and help to maintain air and vapour sealing by minimising penetrations through the AVCL.

#### Fixing - to light gauge steel framing (SFS): Option 2

Permanent fixing of DuPont™ AirGuard® A2 FR may be made with mechanical fixings through to the steel structure, where suitable drill-tip or self-tapping screws may be used. A rubber or EPDM washer should sit between the screw head and the membrane for air sealing purposes. Screw fixings should be spaced vertically at 500mm centres on every stud (typical 600mm centres).

#### Fixing - to masonry

DuPont™ AirGuard® A2 FR may be fixed to masonry with a suitable anchor fixing system or a masonry screw and EPDM washer. Fixings should be at 500mm centres max. For air and vapour sealing, Tyvek® Butyl Tape may be used at fixing points where a compressible washer (eg. EPDM) is not employed. Tyvek® Primer can be applied to chalky or porous masonry to seal the surface and improve adhesion before applying adhesive tape.

#### Fixing – to timber floor/ceiling (Outside scope of A2 Classification)

Where DuPont™ AirGuard® A2 FR is fixed to timber, a combination of Tyvek® Double Sided (acrylic) Tape and stainless-steel staples should be used. These should be spaced at 300mm vertical centres and 600mm horizontal centres (or on every joist/rafter).

### Internal lining

Where an internal lining (plasterboard) is being fitted, the membrane will be secured with a steel channel or lining bracket as per the guidance in Option 1 above. Where channels /brackets over the membrane are not being used Tyvek® Butyl Tape should be applied to the structure beforehand and the staple fixed through. Subsequent fixings for the internal lining should also be made through the Tyvek® Butyl Tape.

### Rainscreen Cladding Applications

DuPont™ AirGuard® A2 FR may be fixed to the external face of a cement bonded particle board, gypsum board or calcium silicate board using a combination of Tyvek® Double sided (acrylic) Tape and stainless-steel staples. DuPont™ AirGuard® A2 FR may also be secured by fixing through the sheathing to the underlying structure using suitable drill-tip or self-tapping screws. See Fixing - to steelwork (SFS) above.

In many cases, the retrospective fixing of channels, rails, brackets & insulation will provide the principle security for the membrane. Care should be taken to ensure these components are fixed tightly over the membrane to avoid water ingress. If in doubt Tyvek® Butyl Tape may be used between the component and the membrane.

Note: The channels, rails, brackets, insulation and external protection layers should be applied as soon as possible to avoid damage to the membrane.

### Fixing to insulation

Fix DuPont™ AirGuard® A2 FR to rigid insulation with a proprietary expanding insulation fixing anchor at maximum 500mm centres. Penetrations made by wall ties or cladding brackets must be made good with either DuPont™ AirGuard® FR System Tape or Tyvek® FlexWrap EZ.

## Detailing

Cover entirely the inside face of the roof or wall, ensuring maximum coverage. Maintain continuity at adjacent walls, floors and roof junctions with DuPont™ AirGuard® FR System Tape and/or Tyvek® Double Sided (acrylic) Tape.

## Windows/doors/loft hatches

DuPont™ AirGuard® A2 FR should be sealed tight against the frame with DuPont™ AirGuard® FR System Tape or tucked in and compressed by the frame. Internal corners should be made good with Tyvek® AirGuard® Tape or Tyvek® FlexWrap EZ. Tyvek® Window Tape may be used for all the window sealing work, if plaster or render is later to be applied.

## Penetrations

All penetrations through DuPont™ AirGuard® A2 FR (lighting, pipework, wiring, etc.) should be sealed with DuPont™ AirGuard® FR System Tape or Tyvek® FlexWrap EZ. Fixings to timber, masonry or steelwork may be sealed with Tyvek® Butyl Tape.

## Service void

The internal lining (plasterboard, etc.) can be spaced off DuPont™ AirGuard® A2 FR to create a services void. This will help to avoid penetrations through the membrane by electrical sockets, light fittings, etc, and to maximise the reflective benefits of the membrane. Steel channels of minimum 25mm may be used for this. To assist with air-sealing, Tyvek® Butyl Tape can be applied behind the channel beforehand.

## Light fittings

Where no services void exists, a sealed enclosure should be formed over light fittings. The enclosure must be sealed to the membrane using DuPont™ AirGuard® FR System Tape. Wiring penetrations must be sealed as much as possible using DuPont™ AirGuard® FR System Tape or Tyvek® FlexWrap EZ. Where downlights are specified the preference is to use sealed, low energy (LED) units with F Capped approval, allowing continuous thermal insulation over the light unit. If halogen units are used, they should have an F Capped Approved loft cap fitted above.

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## A2 Classification Notes

### 1 – Fire Class System

DuPont™ AirGuard® A2 FR is a fire retardant AVCL with Fire Classification A2-s1,d0 in accordance with EN 13501-1. The complete system comprises a foil faced glass fibre membrane; DuPont™ AirGuard® A2 FR, with a single-sided adhesive sealing tape; DuPont™ AirGuard® FR System Tape (style code: 1310FR). This product combination and arrangement represents the officially classified system and meets the fire class requirements of materials used in walls in high-rise buildings for all countries/regions.

### 2 – Tapes & Sealants Exemptions

Where tape or sealant products other than DuPont™ AirGuard® FR System Tape are used, the A2 system class will not apply. However, some Building Regulation documents relating to fire performance allow an exemption of tape & sealant products. Regulatory compliance may therefore be met only where a list of material exemptions is included in the relevant regional guidance document.

Users must familiarise themselves with their regional regulatory guidance documents and become aware of the requirements and any variations that may affect the use of these products.

### 3 – Substrates

Where DuPont™ AirGuard® A2 FR is laid directly over underlying substrates (sheathing, insulation, etc.), they must have a fire class of A1 or A2-s1,d0 to EN 13501-1 for the system to achieve the A2 classification.

### 4 – Orientation

The reflective foil surface of DuPont™ AirGuard® A2 FR must face outwards and not be directed towards an underlying substrate.

### 5 – Free-hanging

Where DuPont™ AirGuard® A2 FR is laid free-hanging, the underlying substrate must have a fire class of A1 or A2-s1,d0 to EN 13501-1 and the air gap between membrane and substrate must be a minimum 40mm.

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## DuPont™ Tyvek® Building Knowledge Centre (BKC) – EMEA

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