



DuPont™ Tyvek® StructureGuard installation

NBS: H92 785, P10 320

Also: H20, H21, H30, H31, M30

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

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

Breather Membrane to EN 13859-2:2014 shall be **Tyvek® StructureGuard™** as supplied by DuPont Performance Building Solutions, Bristol & Bath Science Park, Dirac Crescent, Emersons Green, Bristol. BS16 7FR

Storage

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

General

Care should be taken when handling the membrane in order to prevent tears and punctures occurring. Any that do occur should be repaired with Tyvek® Acrylic Tape (2060B).

Application

Unroll Tyvek® StructureGuard™ horizontally over the face of the construction. Ensure maximum coverage by extending 100mm min below the sheathing, CP board or lowest structural timber/steel member.

Initial fixing

Tyvek® Double sided (acrylic) Tape (50mm) may be used to provide an initial fix for Tyvek® StructureGuard™, but mechanical fixings (see below) must be made almost immediately after. Permanent security of the membrane may also be made with external insulation, battens or cladding brackets. Extra care should be taken where the membrane is exposed to high wind conditions.

Fixing – to timber studs/sheathing

Fix Tyvek® StructureGuard™ with stainless steel staples or corrosion resistant nails. Fix membrane at 600mm centres horizontally, 300mm centres vertically and at 150mm centres at joints and openings.

Fixing - to masonry

Tyvek® StructureGuard™ may be fixed to masonry with a suitable anchor fixing system or a masonry nail/screw and EPDM rubber washer. Fixings should be at maximum 500mm centres. Tyvek® Butyl Tape (double sided) may be used to fix the membrane in addition to the mechanical methods suggested above. Tyvek® Primer can be applied to chalky or porous masonry to seal the surface and improve adhesion before applying adhesive tape.

Fixing - to steelwork (SFS)

Initial (temporary) fixing of Tyvek® StructureGuard™ may be made with continuous strips of Tyvek® Double Sided (acrylic) Tape. These should be supplemented with mechanical fixings through to the steel structure, where suitable drill-tip or self-tapping screws may be used. The screws must sit flush (not countersunk) and a rubber or EPDM washer should sit between the screw heads and the membrane to avoid water ingress. Screw fixings should be spaced vertically at 500mm centres on every stud (typically spaced at 600mm horizontal centres).

Fixing - Rainscreen Cladding Applications

Tyvek® StructureGuard™ may be fixed to the external face of a cement bonded particle board, OSB or ply sheathing, using a combination of Tyvek® Double sided (acrylic) Tape and stainless-steel staples. Tyvek® Housewrap 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 timber battens or metal 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.

Fixing to insulation

Fix Tyvek® StructureGuard™ 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 Tyvek® Acrylic Tape (2060B) or Tyvek® FlexWrap EZ.

Laps

All horizontal laps in the membrane should be 100mm min. Vertical laps should be 150mm min.

External corners

Dress Tyvek® StructureGuard™ around external corners ensuring a return of 300mm min.

Window openings

Wrap Tyvek® StructureGuard™ into window/door openings and seal to frame with Tyvek® Acrylic Tape (2060B) or Tyvek Plastering Tape if render is later to be applied. Make good to corners using Tyvek® FlexWrap EZ.

Cavity barriers/trays/flashings

Dress Tyvek® StructureGuard™ over cavity barrier/tray/flushing ensuring a minimum lap of 100mm.

Floor junctions

Dress Tyvek® StructureGuard™ over intermediate floor zone ensuring a minimum lap of 100mm between sheets

Airtightness – sealing (optional)

Tyvek® StructureGuard™ has been tested for 'Resistance to penetration of air' in accordance with EN 12114 achieving $0.25 \text{ m}^3/\text{h.m}^2$ at 50 Pa. With all laps and penetrations sealed, Tyvek® StructureGuard™ will contribute to the overall airtightness of the building.

Seal the laps in Tyvek® StructureGuard™ with Tyvek® Acrylic Tape (2060B) or Tyvek® Double sided (acrylic) Tape. Fixing penetrations can be sealed by applying Tyvek Butyl Tape to the substrate before the membrane is installed. Complicated penetrations may be sealed using Tyvek® FlexWrap EZ.

System Solution

Tyvek® StructureGuard™ may be installed as part of a complete membrane system which includes an internal AVCL to control condensation and to significantly improve overall airtightness for the element. DuPont™ AirGuard™ Reflective or AirGuard™ Reflective E are recommended for this purpose.

Compatibility

Where timber treatments are used care should be taken to ensure they are touch-dry before the installation of the Tyvek® membrane. Retrospective spray applied micro emulsions can also pose significant risk to polymer-based materials such as Tyvek® StructureGuard™. Masking the membrane against preservative treatments should be considered.

Temporary exposure period

Tyvek® StructureGuard™ may be left exposed for a period not exceeding **4 months**, provided that the membrane is adequately secured in accordance with our recommendations. Site conditions and exposure to wind should be assessed to determine whether extra security measures for the membrane are required.

Fire regulations

Tyvek® StructureGuard™ has Fire Classification E in accordance with EN 13501-1. Care should be taken to determine suitability of this membrane for the intended application, with specific regard to building height and proximity to boundary. Users/specifiers should refer to their regional regulatory guidance documents in case there are any requirements or variations that may restrict the use of this product.

Video installation link: <https://www.dupont.co.uk/resource-center.html?BU=pbs&restype=video>

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