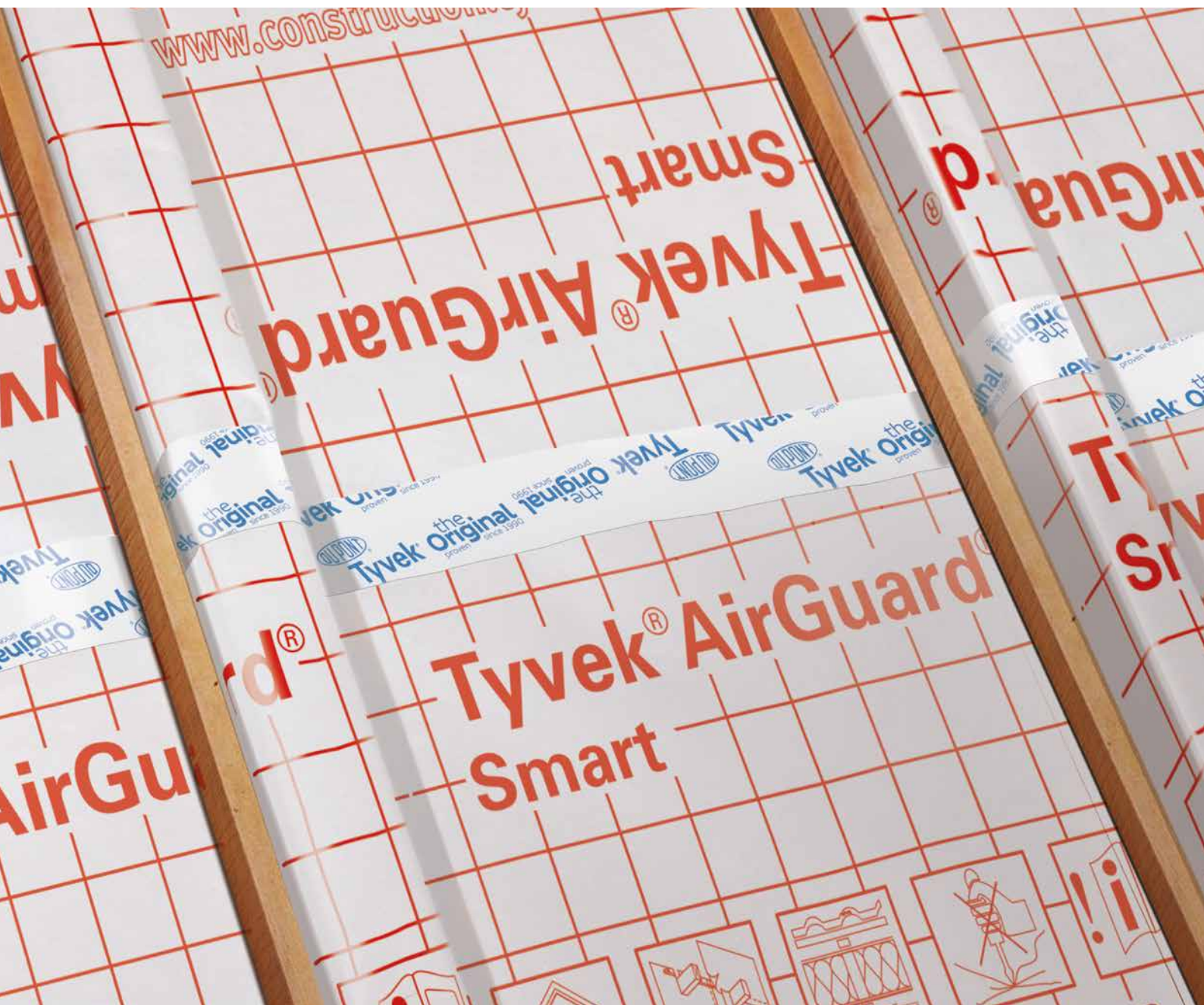


DUPONT™

Tyvek®

DuPont™ Tyvek® AirGuard® Smart

**Air & vapour control layer with
variable vapour resistance**



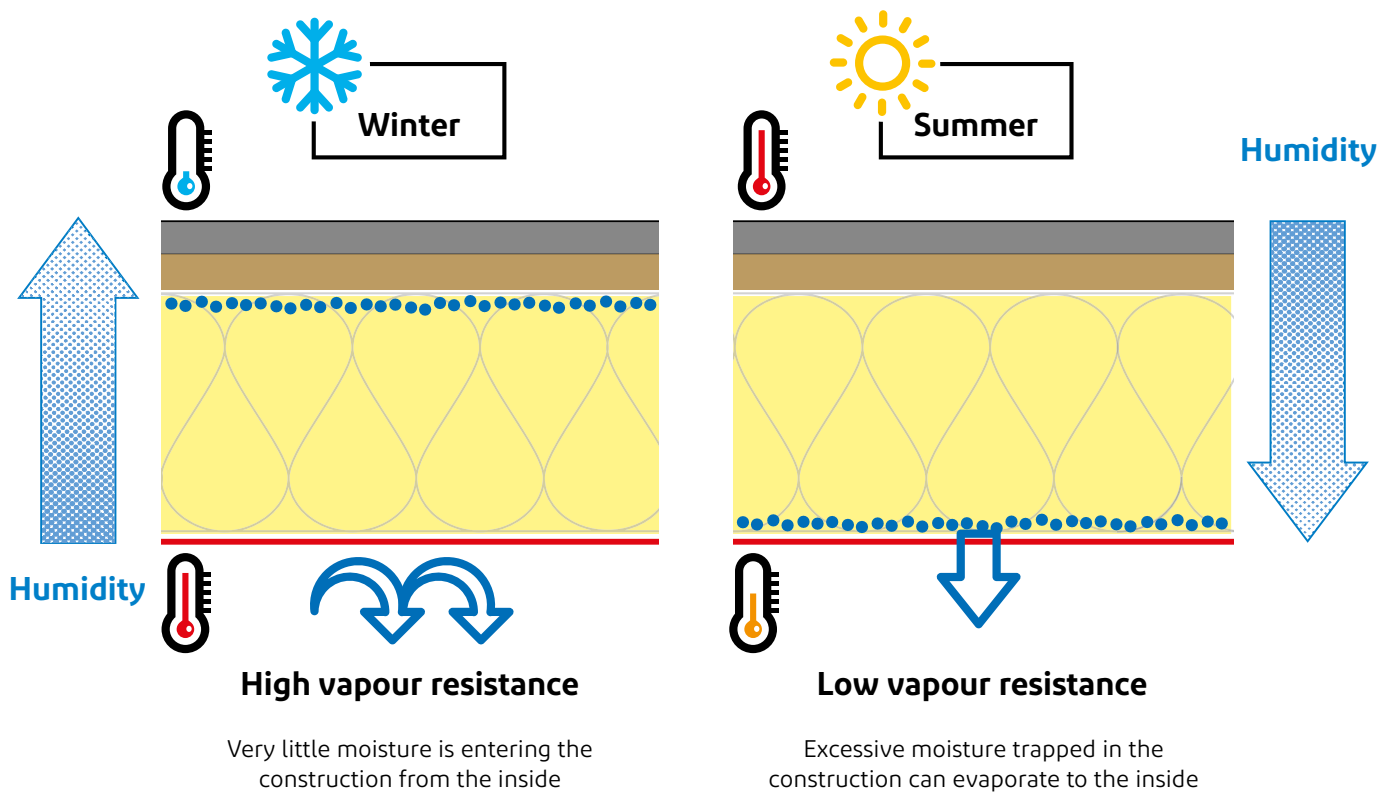
How Tyvek® AirGuard® Smart works

Tyvek® AirGuard® Smart prevents structure damage and loss of insulation efficiency by smartly adapting to various moisture conditions and regulating the humidity in building elements.



Tyvek® AirGuard® Smart adapts:

- to allow faster evacuation of built-in humidity in new construction elements (e.g.: wet rafters)
- to avoid humidity infiltration from the living space into the construction elements during winter
- to allow moisture trapped in the structure to escape to the building interior



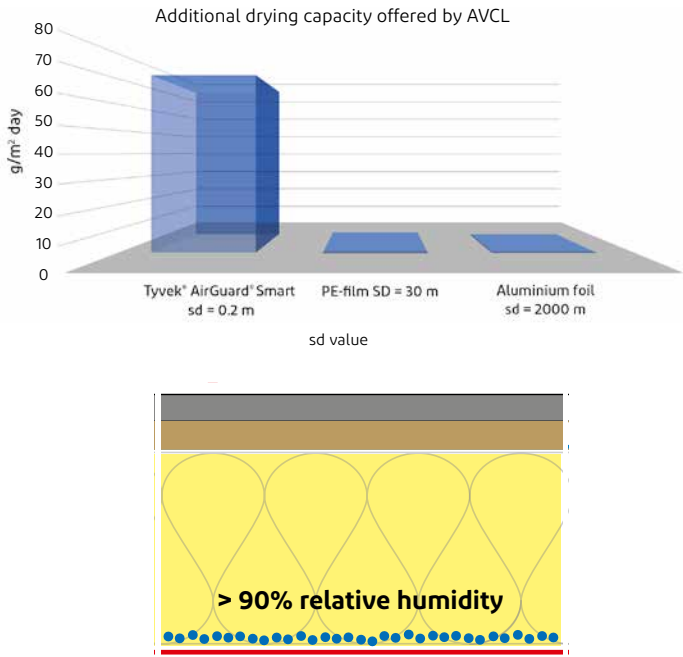
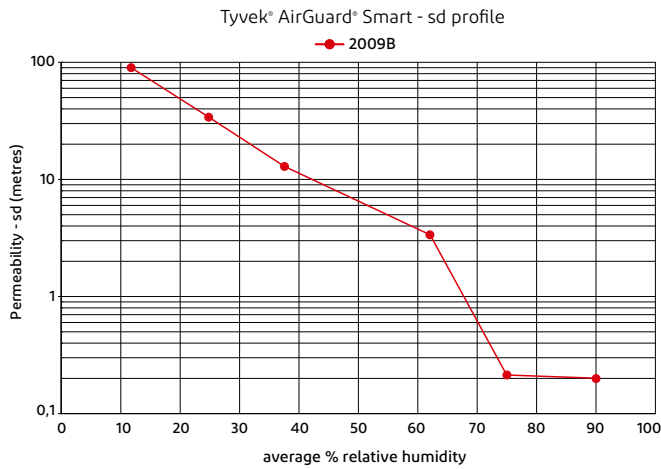
Typical applications	Benefits
New construction	Reduced drying out time. Drying out by moisture migrating back into the building
Renovations from the exterior	Allows continuous installation of AVCL from the outside without risking condensation to the upper side of rafters
Flat and pitched roofs with HR (High Resistance) underlay	Only an adaptive AVCL allows drying out in this type of application
Use a standard AVCL *	



Why Tyvek® AirGuard® Smart?

- Reduced drying out time
- Durability, health and longevity of buildings
- Greater energy efficiency
- Additional drying capacity for unplanned humidity infiltration
- Enhanced interior comfort
- Trusted Tyvek® brand: robustness and durability
- Part of the Tyvek® system

Variable sd AVCL: the broader the range, the more efficient the humidity control



Specifications	
Material	Tyvek® with polymeric coating
Style	2009B
Watertightness acc. to EN13859-1 based on 1928 (A)	W1
Roll size/weight	1.50 m x 50 m / 8 kg
Reaction to fire	E
Mass per unit area	92 g/m²
Water vapour transmission range (s _d -value)	35 m (dry environment) / 0.2 m (humid environment)
Temperature resistance	from -40 °C to +80 °C
Maximum tensile force (MD/XD)	390/380 N/50mm
Resistance to tearing (MD/XD)	75/65 N
Air permeability (ISO 5636/5)	2000 s



Tyvek® Acrylic Tape



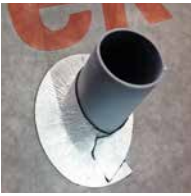
Tyvek® Butyl Tape



Tyvek® Double-sided Tape

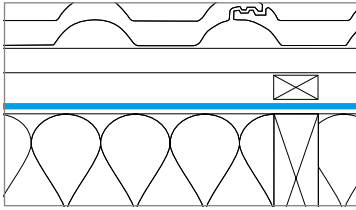


Tyvek® FlexWrap NF / Tyvek® FlexWrap EZ

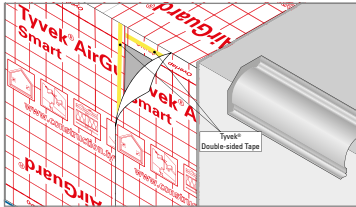


Installation Guidelines

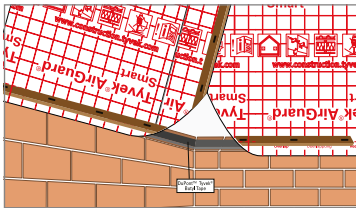
1 - Service Void



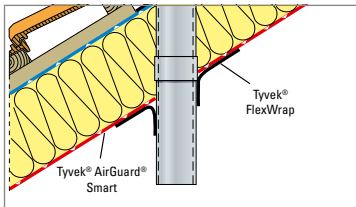
2 - Wall to ceiling junction



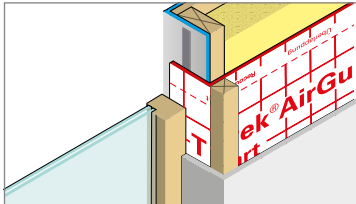
3 - Ceiling Masonry junction



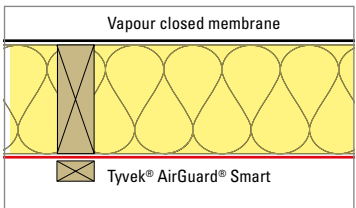
4 - Penetrations



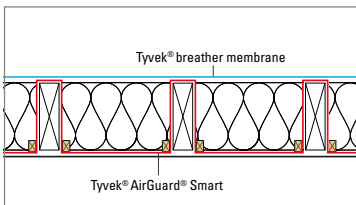
5 - Window/door frame sealing



6 - Flat roofs



7 - Renovation from the exterior



Tyvek® AirGuard® Smart is suitable for installation into many types of construction element; timber frame/SFS wall systems, suspended floor applications, flat roofs, cold and warm pitched roofs. Applications range from new-build, right through to existing problematic projects where refurbishment work is needed.

Detailing: The integrity of Tyvek® AirGuard® Smart is essential for it to perform as an effective vapour control layer and air leakage barrier. The internal lining (plasterboard, etc.) may be fixed directly through the membrane if required. However, for maximum efficiency the internal lining can be fixed via battens creating a service void which will also help to minimise penetrations (Fig. 1).

Continuity of the membrane should be maintained at adjacent walls, floors and roofs with Tyvek® Butyl Tape or Tyvek® Double-sided Tape (Fig.2).

Ceiling Masonry junction: Tyvek® Butyl Tape may be used to seal Tyvek® AirGuard® Smart to masonry surfaces. Tyvek® Butyl Tape may also be used to seal fixing points. Note: Where practicable, timber battens are recommended to fix Tyvek® AirGuard® Smart to any adjacent surfaces (Fig. 3).

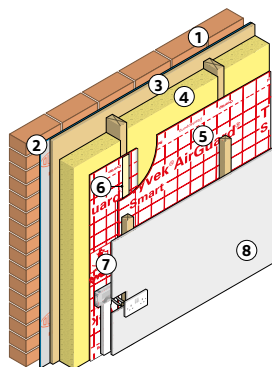
Penetrations and making good: Penetrations through the membrane should be kept to a minimum and any that are made should be sealed. All membrane laps should be sealed with Tyvek® Acrylic Tape, and penetrations for pipework, wiring and electrical sockets should be made good with Tyvek® FlexWrap (Fig. 4).

Windows/doors: Tyvek® AirGuard® Smart should be installed convection tight at all window, door and hatch openings. The membrane should be sealed with Tyvek® Butyl Tape or tucked in and compressed by the frame (Fig. 5) Corners are best sealed with Tyvek® FlexWrap.

Flat roofs: A typical application for Tyvek® AirGuard® Smart is in flat roofs (Fig. 6).

Roof renovation from the exterior: In specific cases Tyvek® AirGuard® Smart may be installed from above, with the membrane installed 'up-and-over the rafters/joists (Fig. 7). For information on this installation please contact our BKC Technical Office: 0117 970 9454/9455

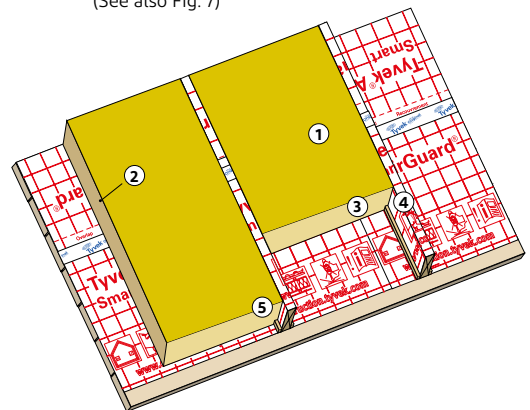
Wall installation



- | | |
|---|-----------------------------|
| 1 | Cladding |
| 2 | Tyvek® breather membrane |
| 3 | Sheathing |
| 4 | Insulation |
| 5 | AVCL Tyvek® AirGuard® Smart |
| 6 | Tyvek® Butyl Tape |
| 7 | Service void |
| 8 | Plasterboard |

Renovation from the exterior

(See also Fig. 7)



- | | |
|---|-----------------------------|
| 1 | Insulation |
| 2 | Tyvek® Acrylic Tape |
| 3 | AVCL Tyvek® AirGuard® Smart |
| 4 | Timber batten |
| 5 | Plasterboard |

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www.building.dupont.co.uk

* not applicable for high humidity environments like swimming pools, professional kitchens ...

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