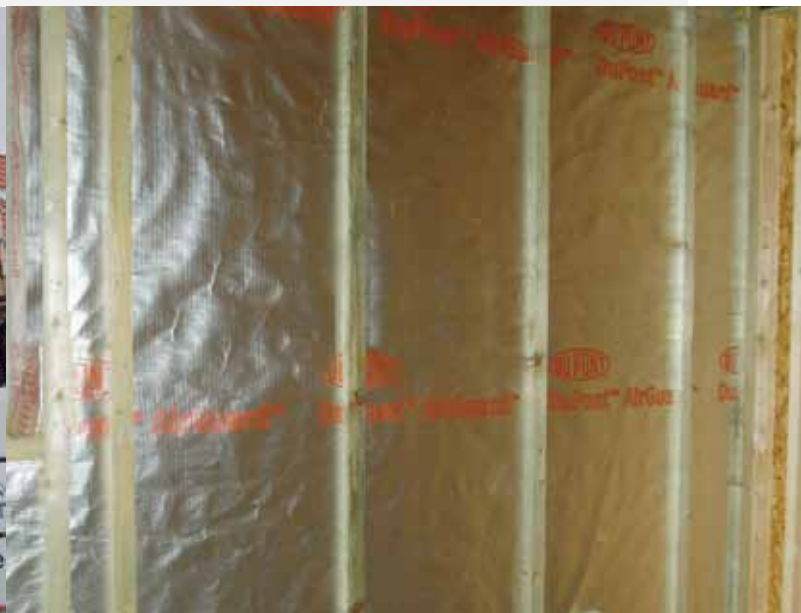


ENERGY EFFICIENT SOLUTIONS FROM DUPONT™ TYVEK® AND DUPONT™ AIRGUARD®

Build airtight and condensation free



DuPont™ AirGuard® Reflective achieves an airtight seal of approval at a new Housing Association project in York

Considering the imperative - both social and regulatory - to improve the energy efficiency of buildings, it's no surprise that specifiers and developers are looking for forward-thinking, high-performance products that can help in achieving these goals. One of the crucial factors in convective thermal loss can be identified as air leakage, traditionally a common problem in UK construction. When the architect and the timber frame contractor for a new Housing Association development were aiming for ultra low heating consumption, an advanced material from DuPont offered the ideal solution for optimal structural air tightness. DuPont™ AirGuard® Reflective is a metallised air & vapour control layer (AVCL) that is impermeable to both air and moisture while offering very low emissivity, thereby also playing a key role in preventing heat loss and reflecting up to 95% of internal radiant heat in the winter.

“The scheme is fundamentally different from conventional British housing which has relied on central heating systems to create comfort, with insulation used merely to reduce fuel costs. These houses instead use high levels of air tightness and insulation to provide comfort,” says Phil Bixby of Constructive Individuals. “The Housing Association needed to be assured that the concept would work without complaints from tenants, and the concept does depend upon occupants correctly using the ventilation system, but after extensive research they were satisfied.”

DuPont™ AirGuard® Reflective was installed to effectively line the inside of the structure in a continuous layer. Pressure tests on the completed plots have shown excellent results:

- Plot 1 (end terrace) - Air permeability 1.58 m³/h.m²,
Air leakage 1.51 h⁻¹
- Plot 2 (mid terrace) - Air permeability 1.94 m³/h.m²,
Air leakage 1.86 h⁻¹

Building Regulations Approved Document L sets a “reasonable limit for the Design Air Permeability” of 10m³/h.m² at 50 Pa. - and these figures are considerably below that maximum prescribed limit.

The key to successful air tightness is the quality of both the membrane and the tapes, together with the workmanship during installation. There are no doubts about the performance - and crucially - durability of the products. They are relatively easy and straightforward to apply and are very effective if installation is properly managed. Ultimately, however, energy savings are also dependent on the awareness and management of the end-user!

For more information, please contact our sales team

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Find out more about the sustainable offering of
Energy Efficient building products at
www.tyvek.co.uk

DUPONT™ TYVEK® REFLEX PROVIDES LONG TERM PROTECTION

Trusted long term performance and proven durability



- Tyvek® Reflex was installed in 4 timber frame houses in Burwell
- Building work was left incomplete and the product was fully exposed to the elements and potential UV degradation for 33 months.

→ **DuPont guarantees the functionality of Tyvek® Reflex if exposed to UV no longer than 4 months during installation. Tests have shown, the product has suffer nearly no reduction in performance. The recommended time period by DuPont was clearly exceeded by over 800%!**

Performance of DuPont™ Tyvek® Reflex after 33 months (March 2008 to December 2010) full natural exposure*

Property	Standard	Unit	Tyvek® Reflex new	North: after 33 months UV	South: after 33 months UV
Water tightness Class	EN 13859-2	Class	W1	W1	W1
Water hold out	EN 20811	cm	>200	200/220	160/180
Tensile MD/XD	EN 13859-2	N/5cm	250/210	215/180	212/164
Emissivity	ASTM C-1371	-	0.15	-15%	-15%



Two main important criteria for a reflective membrane:

- The emissivity value and hence the benefit to the construction value
- Protection against water hold out

Test results:

- Water hold out was nearly unaffected
- Emissivity performance drop of only 0.03

- **This is an extremely small reduction in performance**
- **Long term performance**
- **Energy Efficiency**

**internal measurements*

TIME WILL TELL... SO CHOOSE DUPONT™ TYVEK®

The anti-ageing product you can rely on



Don't risk your roof!

the
Original
proven since 1990

Tyvek® stands for:

- Water tightness year after year
- Proven significantly superior durability (*)
- Unique UV and heat resistance which other tested breathable underlays cannot guarantee (*)
- Tyvek®, with its unique functional layer, is the trouble-free, future-proof solution

Think long term and be worry-free: choose Tyvek®.

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() Independent product ageing test*