Fixing Instructions

General

- ✓ PhotonAir does not require personal protective equipment to be used.
- ✓ As with all insulation, installers should follow the Electrical Wiring Regulations when in the presence of electrical wiring.
- ✓ Secondary insulation such as PIR and glass wool should be installed as described in manufacturers' literature.
- ✓ Installation should follow Building Regulations and current good building practice.
- ✓ PhotonAir must be installed reflective side facing in.

Installation draped (no counter battening)

- ✓ PhotonAir is installed horizontally from left to right (ridge to eaves or eaves to ridge). The left hand side of PhotonAir is fitted in place with staples of at least 14mm, and the PhotonAir unrolled across the rafters. PhotonAir should be draped down between the rafters such that, when tile battened, a clear 10mm deep drape is formed to allow water to run down and for air movement. Staple the PhotonAir every few rafter spaces to hold it in place.
- ✓ Each layer of PhotonAir must butt-join the previous layer, with the 150mm membrane overlap running onto the lower layer, thus ensuring that any water runs down the roof slope without penetrating between layers.
- ✓ The membrane overlap on the bottom layer of PhotonAir should extend onto a suitable eaves carrier.
- ✓ Additional breather membrane may be used to cover the gaps between PhotonAir and the eaves carrier if required.
- ✓ PhotonAir is permanently held in place by tiling battens and then tiles are fitted. The tiling battens should hold the layers of PhotonAir in close contact, if there is any doubt then the 15mm membrane overlap may be taped in place with a suitable double or single sided tape.
- ✓ It is good practice to cover PhotonAir once installed as soon as possible.

Installation taught (with counter battening)

- ✓ PhotonAir is installed horizontally from left to right (ridge to eaves or eaves to ridge). The left hand side of PhotonAir is fitted in place with staples of at least 14mm, and the PhotonAir rolled taut across the rafters. Staple the PhotonAir every few rafter spaces to hold it in place.
- ✓ Each layer of PhotonAir must butt-join the previous layer, with the 150mm membrane overlap running onto the lower layer, thus ensuring that any water runs down the roof slope without penetrating between layers.
- ✓ The membrane overlap on the bottom layer of PhotonAir should extend onto a suitable eaves carrier.
- ✓ Additional breather membrane may be used to cover the gaps between PhotonAir and the eaves carrier if required.
- ✓ PhotonAir is permanently held in place with counter battens, then tiling battens and tiles are fitted. The counter battens should hold the layers of PhotonAir in close contact, if there is any doubt then the 15mm membrane overlap may be taped in place with a suitable double or single sided tape.
- ✓ It is good practice to cover PhotonAir once installed as soon as possible.

Fixing Instructions

Cutting and taping

- ✓ PhotonAir is easily cut with sharp scissors (Kretzer Finny recommended) or sharp knife against a board.
- ✓ Pieces which have been cut should be stapled and battened as soon as possible, and should not be left unsecured.
- ✓ Small pieces (such as around Velux windows or in dormer cheeks) should be taped in place, stapled and battened immediately.
- ✓ Small tears or holes should be repaired with tape. Larger holes in the top layer of PhotonAir should be patched with a piece of breathable underlay
- ✓ PhotonAir has a 150mm membrane flaps on one edge which allows it to be butted up to itself and taped either with a specified double sided tape under the flap or a single sided tape on the overlap.
    - Double-sided tape : SteraTape 2331F
    - Single-sided tape : Henkel All-Purpose Duck tape

Air gaps and air leakage

- ✓ Unventilated air layers form an important part of the PhotonAir system. If the air spaces are omitted there is no danger of condensation but the overall thermal performance of the structure will decrease.
- ✓ Building Regulations require that air leakage through and around insulation is kept to a minimum.
- ✓ PhotonAir's very low emissivity surface allows the optimisation of air gap performance.
- ✓ The optimum thermal performance of PhotonAir is gained from the use of 20mm air gaps.
- ✓ The flexible nature of PhotonAir allows it to be easily stapled and sealed to awkward shaped structures.

Vapour control and ventilation

- ✓ A well-sealed ceiling, constructed in accordance with BS5250, is essential to prevent large amounts of water vapour from entering the roof space.
- ✓ Ventilation of the space between the PhotonAir and the outer roof covering is not required for air-open coverings such as clay or concrete tiles and rough natural slates. Smooth slates and sealed roof coverings such as metal roofs require additional ventilation.
- ✓ If in any doubt about possible condensation risk, contact Thermic Technology Ltd for guidance www.thermictechnology.co.uk

