

POWERLON® ULTRABLOCK

INSTALLATION INSTRUCTIONS

APPLICATION

Powerlon UltraBlock membranes are suitable for all roof and wall installations.

These thermo-reflective reinforced vapour control layers incorporate encapsulated aluminium foil or metallised barrier layers to maximise energy efficiency. The thermo-reflective surface improves the insulation by reflecting heat back into the building.

Supplied in rolls, Powerlon UltraBlock is joined using proprietary Powerbond tapes and should be installed on the warm side of the insulate with the thermo-reflective surface exposed.

Due to their inert chemical composition, Powerlon UltraBlock membranes are compatible with insulation and roofing materials.

DESIGN DETAILS

1. CONTINUITY

Powerlon UltraBlock should be continuous over the whole plan area of the structure. All laps should be sealed with the appropriate Powerbond sealing tape and the number of joints should be kept to a minimum by using the full width of the membrane.

2. ROOF TYPES

a. *Cold Roofs* Cold roofs with the UltraBlock membrane draped between purlins with the insulation above are harder to seal at the laps. Consideration should be given to supporting the laps. In high-risk areas a rigid lining sheet is recommended throughout to support the UltraBlock membrane.

b. *Warm Roofs* Sealing UltraBlock membranes in warm roofs is much easier as it is supported by the structural deck directly beneath. Sealing tape allows for any slight expansion or contraction movement in the decking.

c. *High Risk Roofs* The 'NFRC Profiled Sheet Metal Roofing & Cladding - A Guide to Good Practice' suggests that the water vapour resistance of an UltraBlock membrane within high-risk roofs should be at least 500 MNs/g.

3. SERVICE PENETRATIONS

Service penetrations should be kept to a minimum. Airtight seals are required around each point of entry. Particular attention is required to sealing all penetrations such as soil pipes, vent pipes and roof lights as well as the roof perimeter.

4. TIMBER FRAME DESIGNS

Timber frame fixings should not puncture the barrier.

INSTALLATION

Installation should be performed in conjunction with the recommendations in Design Details above.

1. WORKING WITH THE MEMBRANE

- Always work with clean hands or wear gloves and use clean tools.
- The UltraBlock membrane should be laid loose, flat and without wrinkles; ensure that the membrane is not creased or folded.
- Weather Conditions
 - Cold makes the UltraBlock becomes less supple and installations should be avoided whenever site temperatures fall below 5° C.
 - Installation in windy conditions is not recommended since the UltraBlock becomes difficult to handle and is liable to flap in the wind.
- The material can be cut using a sharp knife. Always overlap the cut edge.
- All overlaps should ideally be 150mm, horizontally or vertically

2. JOINING OF ROLLS AND PANELS

- The number of joints should be kept to a minimum by using the full width of the membrane.
- Joins should only be made where the membrane is supported (i.e. not where the join bridges unsupported areas).
- The surfaces should be clean and dry, free of any dirt, condensation, grease, etc.
- Rolls or panels may be joined by taping as follows:
 - A continuous double row of Powerbond Butyl Tape spaced 75mm apart is recommended for overlap sealing (Fig. 1)
 - Sealing the overlap with Powerbond FR Aluminium Tape (Fig. 2)
 - For optimal water resistance and airtightness, using both methods is recommended.
 - All joins should be firmly pressed together using a hand-held pressure roller to ensure that the tape has adhered properly to the membrane.
 - Only apply tapes at an ambient temperature of 5° C.

Fig. 1
Powerbond Butyl Tape Overlap Join Detail

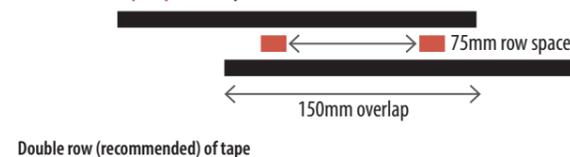
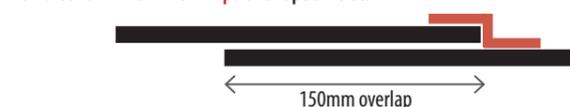


Fig. 2
Powerbond FR Aluminium Tape Overlap Join Detail



3. SEALING

- To maintain the integrity of the system, sealing should be performed as follows:
 - Service penetrations - Where services and pipework need to penetrate the membrane, use Powerbond Butyl or FR Aluminium Tape to create airtight seals around each point of entry.
 - Corners - To avoid cutting the membrane, it is important that the membrane is folded into the corner and then reinforced by an additional protective layer of membrane.
 - Absorbant surfaces (e.g. concrete, wood) - Absorbant surfaces must be primed with quick drying bituthene primer before sealing with Powerbond Sealing Tapes.

4. ELONGATION

- Whilst elongation of any vapour control layer should be avoided, Powerlon UltraBlock membranes incorporate a reinforced grid to reduce the risk of elongation. Membranes should be laid loosely on the site in order to allow for any movement. They should not be pulled taught.
- When covering the membrane, care should be taken to ensure that the membrane is not displaced, damaged or stretched.

5. INSPECTION

Prior to covering, the UltraBlock barrier should be thoroughly inspected to verify the integrity of the joining and sealing and ensure that no damage has occurred to the membrane during installation. Any damage should be repaired to ensure an airtight seal. A competent installation contractor should carry out inspection and repair of the UltraBlock membrane.

6. REPAIRS

Damaged areas must be repaired using patches of Powerlon UltraBlock. The area must be clean, dry and free of dust and grease. The patch must not extend beyond 150mm of the damaged area. Fix the patch by using a continuous double row of Powerbond Butyl Tape, spaced 75mm apart.

7. FURTHER INFORMATION

These installation instructions are based upon currently available good practice and information and only offered as a general guide.

Final determination of the suitability of any information or material for the use contemplated and the manner of use is the sole responsibility of the user and the user must assume all risk and liability in connection therewith.

Check the suitability and safety of the products for the use envisaged with all current and applicable national standards.

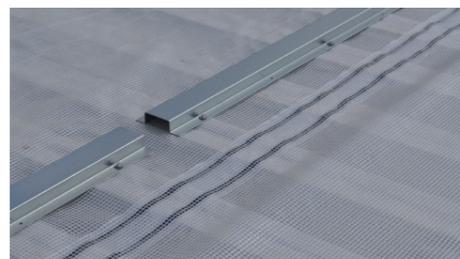
IMPORTANT

Protect Powerlon UltraBlock from UV exposure. Cover and finish the construction of the UltraBlock installation within a maximum of 3 months (for Western Europe).



TECHNICAL HELPLINE

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