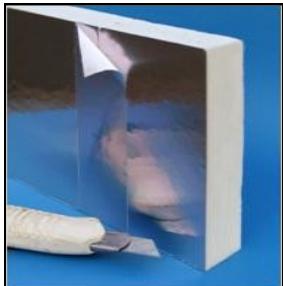


InsuFlect 150PE is a composite sheet material designed to be bonded to board materials to enhance their performance. InsuFlect comprises of a 12.5 micron aluminium foil bonded to a polyethylene core which in turn is bonded to stout kraft paper. The paper acts as an interface allowing the foam to adhere to the InsuFlect.

Outperforming other material's currently in use, the reflectivity of the bright aluminium foil on InsuFlect 150PE has an emissivity of only 0.03, so over 96.5% of radiant heat is reflected back so most of the infrared energy striking its surface is effectively blocked.

Vapour Control Layer

The membrane has a low moisture transmission rate of less than 0.045 g/m, acting as an excellent vapour/dust barrier, halting moisture migration into the foam insulation layers. EncaSeal high performance acrylic adhesive tape can be used to seal the joins between adjacent boards, stud-work, door or window frames



InsuFlects' R Values

Wall $0.66 \text{ m}^2\text{KW}$ - Horizontal Heat Flow

Floor $1.33 \text{ m}^2\text{KW}$ - Downward Heat Flow

Ceiling $0.45 \text{ m}^2\text{KW}$ -Upwards Heat Flow

Pitched Roof $0.51 \text{ m}^2\text{KW}$ – Upwards Heat Flow

Installation

To act as a radiant barrier InsuFlect is installed within a structure facing at least one air space, (usually 19mm to 25mm).

Apollo's high performance adhesive tape can be used to seal the joins between adjacent boards, around stud-work, door or window frames.

CO2 Savings

Our product has been independently tested, and when used can save 12.33kg of CO2 per m² per year on all walls.

When using InsuFlect 150PE both sides of the board with an air gap either side, the R-Values will increase. For example when used in ceiling, the R-value will become $1.25 \text{ m}^2\text{KW}-1$.

Wall

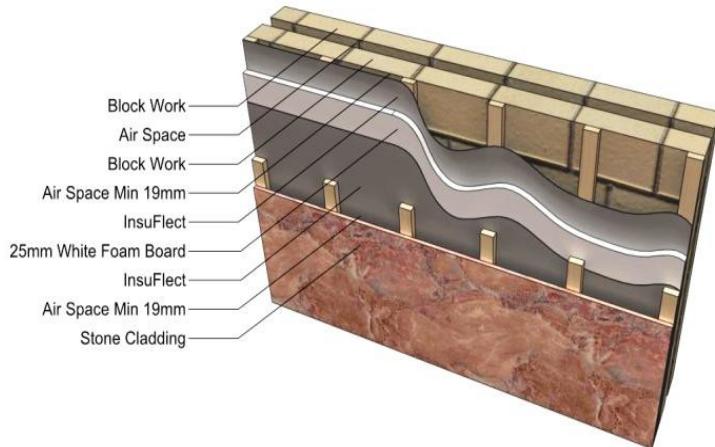
U - Value WITHOUT InsuFlect™ 0.41 W/m2K

U - Value WITH InsuFlect™ 0.26 W/m2K

Floor

U - Value WITHOUT InsuFlect™ 0.40 W/m2K

U - Value WITH InsuFlect™ 0.28 W/m2K



Advantages

The membrane eliminates excessive heat gain caused by incoming solar radiation yet can keep the room warm during cold weather. No matter the season, room temperatures are far easier to control.

This means in summer solar energy is not absorbed by the building or its insulating layers so a lower air conditioning load can be achieved. In winter generated heat is not wasted warming up the insulation. In both scenarios the carbon profile of the building is greatly reduced.

Technical Details

| | |
|---|--------------------------------------|
| Reflectivity (ASTM E903) | over 97.90% |
| Emissivity (ASTM E408) | 0.03 |
| Carbon Emissions Saved | Up to 23kg per m ² /annum |
| Roll Size | 96m x 1.25m 120m ² |
| Nominal Thickness | 135 microns |
| Tear Resistant (ASTM D882) Machine Direction (MD) | Tensile 3905N/m, Trouser tear 10.2N, |
| Tear Resistant (ASTM D882) Cross Direction (CD) | Tensile 4096N/m, Trouser tear 15.6N, |
| Beach Puncture Resistance (ASTM D774) | 40.5kg-cm |
| Moisture/vapour Transmission Rate (ASTM E96) | 0.045g/m ² . |
| Corrosion resistant | Unique surface coating |
| BS476 Part 6 Fire Propagation | Class 0 |
| BS476 Part 7 Surface Flame Spread | Class 1 |