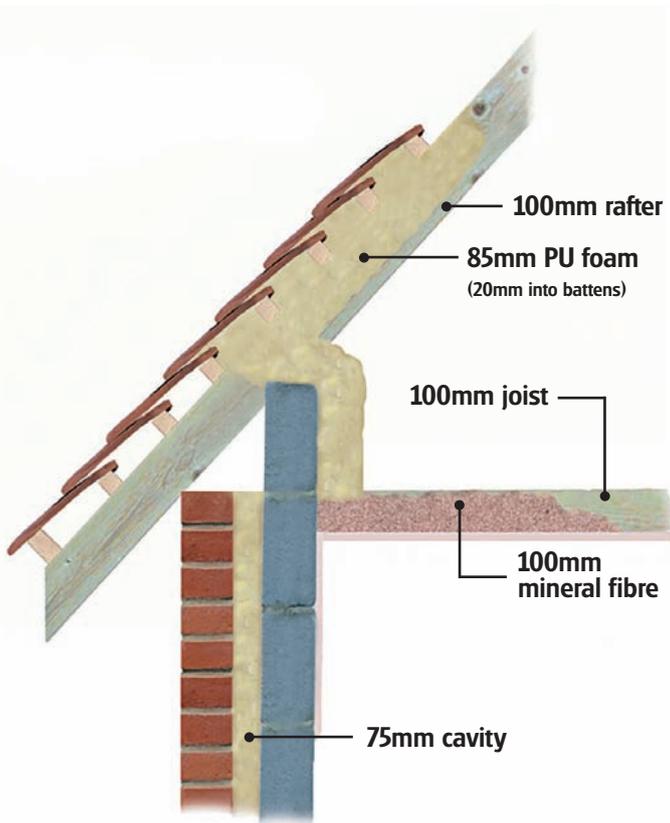


Existing pitched roof horizontal ceiling



General

Spray applied polyurethane foam between battens and rafters

- Average depth:** 105mm
- U-value:** 0.16W/m²K
- Condensation risk:** Zero
- Ventilation:** Unventilated loft space
- Additional insulation:** 100mm mineral fibre at ceiling level

PU foam, applied to the underside the roof, bonds slates or tiles to each other and to structural or supporting timbers to replace the anchorage of fixing nails. It also seals the gaps between slates or tiles, preventing the ingress of wind-blown rain, snow and dust. PU foam is applied between rafters in pitched roofs which enclose a non-habitable and unventilated loft space with additional thermal insulation between horizontal ceiling joists as required. Existing structures must be in a good state of repair with no evidence of rain penetration or damp. Defects should be made good prior to installing the product. The product also minimises unwanted air infiltration and reduces airborne noise pollution from air and road traffic. It is essential that the movement of moisture from the occupied space below by diffusion and convection is restricted by ensuring that all penetrations into the loft are sealed, the water tank is covered and the ceiling lining board has filled or sealed joints (i.e. plastered).'

U-value and Condensation Risk Analyses

Construction details	Thickness (mm)
Hybrid warm pitched roof	
Clay tiles	12.0
PU Foam (between battens)	20.0
PU Foam (between rafters)	85.0
Loft space between flat ceiling and pitched roof lines	-
Mineral fibre	100.0
Gyproc Wallboard	12.5
Thistle Finish Plaster (Multi Board)	2.0
U-value - 0.16W/m²K	

Dew point prediction

