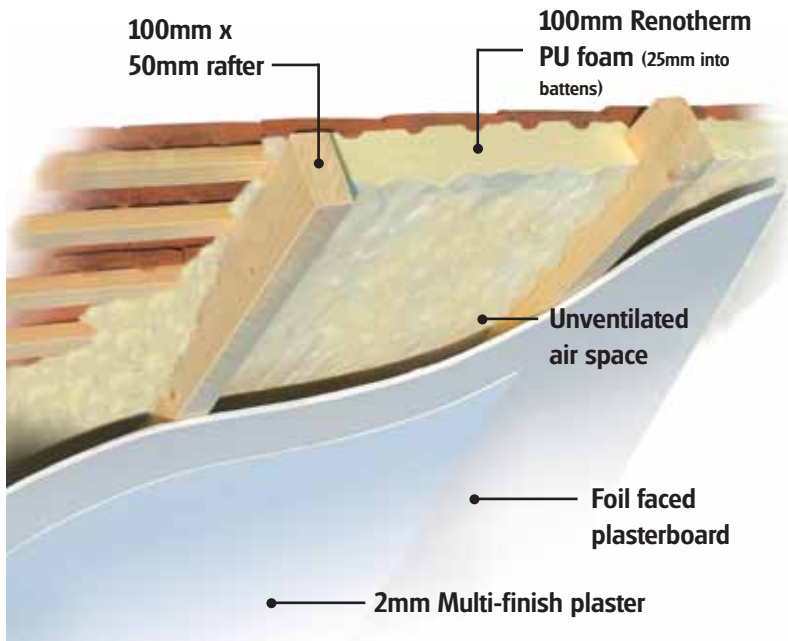


# Existing pitched roof, ceiling at rafter line



## General

- Specification:** BBA Certificates 93/2939 and 02/3964  
**Spray applied Renotherm polyurethane foam between battens and rafters, directly onto existing tiles or slates.**  
**Average depth:** 125mm  
**U-value:** 0.20W/m<sup>2</sup>K  
**Condensation risk:** Zero  
**Ventilation:** Unventilated warm deck  
**Additional insulation:** Foil-faced plasterboard at ceiling level

Renotherm, 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.

Renotherm is applied between rafters in sloping ceiling areas and loft conversions and the U Value of 0.20W/m<sup>2</sup>K can be achieved without the need to lower the existing ceiling height. The foam is then plasterboarded over in the conventional way using foil-backed plasterboard.

Alternatively, in applications such as barn conversions the foam is dubbed out with a coat of bonding plaster and then Thistle finish plaster. 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.

## U-value and Condensation Risk Analyses

Construction details Hybrid warm pitched roof	Thickness (mm)
Clay tiles	12.0
Renotherm PU foam (between battens)	25.0
Renotherm PU foam (between rafters)	100.0
Low emmissivity cavity	-
Vapourcheck Wallboard	12.5
Thistle Finish Plaster (Multi Board)	2.0
<b>U-value - 0.20W/m<sup>2</sup>K</b>	

## Dew point prediction

