



**Technical competency**: The Psi value ( $\Psi$ ) analysis indicated below has been undertaken by a BRE accredited competent person to EN 10211 2017 and BR497 (Second Edition). Members of the Unilin Insulation Technical team are qualified under the BBA Competency Scheme CS/1006 to produce thermal and condensation risk calculations



Certificate No Date	Calculation prepared by		
JI-CWP-E13-RG-03 V2 20-Sep-24	Unilin Insulation Technical Services		
General Construction Specification (Wall)	<b>General Construction Specification (Sloped roof)</b>		
Plasterboard on dabs	Tile/Slate		
Air layer & plaster adhesive	Breathable membrane		
Concrete block	Air layer between rafters		
Unilin Insulation XT/CWP T&G	Unilin Insulation between rafters		
Residual cavity (50mm)	Unilin Insulation below rafters		
Proprietary fire barrier	Vapour control layer		
Brick	Plasterboard		
Table K1 reference	Description		
E13	Sloped roof and gable wall junction		
U value range (Wall)	U value range (Sloped roof)		
0.15 W/m2K - 0.21 W/m2K	0.11 W/m2K - 0.18 W/m2K		
Junction detail	Thermal image		
Pad: gap between a far and wall with compressable insulation  U niin Insulation  between and index calleds  Blockwork inner leaf  Unlin Insulation Thin-R XT/CWP  Cavity  Brickwork outer leaf  Wall be  Plaster date  Plaster date  Plaster date  Plaster date	X = 1  e[C]  20  19  18  17  16  11  13  12  11  10  9  8  7  6  6  5  4  3  2  1		

## Notes

The U values indicated on this certificate are the actual U values for the proposed construction. The Psi values are calculated using the modelled U value in accordance with the guidelines set out in BR497 and ISO 10211. Contact Unilin Insulation Technical Support for further guidance

 $\Psi$  and f are only valid for the detail drawn and described above

Calculations have been carried out in accordance with the following standards and guidance documents were relevant

EN ISO 10211 2017 BR 497 (Second Edition)

EN ISO 13370 2017 BR 443 2019
EN ISO 6946 2017 BRE IP1/06

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**Disclaimer:** The calculations have been completed in accordance with guidance documents as indicated above by Unilin Insulation. Any change to the materials specified would alter the results achieved and would invalidate the information contained herein. Specification and results should be verified before installation. To this extent the information and/or specification is to the best of our knowledge accurate, however Unilin Insulation specifically exclude any liability for errors, omissions or otherwise arising therefrom.



## THIN-R PLUS Linear Thermal Transmittance (ψ) & Temperature Factor (f)

XT/CWP

Sloped roof insulation	Unilin Insulation between and under rafters 100mm/25mm

XT/CWP T&G	75mm		100mm	
	Ψ	f	Ψ	f
Inner block				
0.11	0.066	0.91	0.068	0.91
0.15	0.069	0.90	0.070	0.91
0.19	0.071	0.90	0.072	0.91
0.31	0.075	0.90	0.076	0.91
0.57	0.079	0.91	0.080	0.91
1.13	0.083	0.91	0.085	0.92

**Sloped roof insulation** Unilin Insulation between and under rafters 125mm/25mm

XT/CWP T&G	75mm		100mm	
	Ψ	f	Ψ	f
Inner block				
0.11	0.065	0.91	0.066	0.91
0.15	0.068	0.91	0.069	0.91
0.19	0.070	0.90	0.071	0.91
0.31	0.075	0.90	0.076	0.91
0.57	0.081	0.91	0.082	0.91
1.13	0.087	0.91	0.087	0.92

**Sloped roof insulation** Unilin Insulation between and under rafters 125mm/50mm

XT/CWP T&G	75mm		100mm	
	Ψ	f	Ψ	f
Inner block				
0.11	0.058	0.91	0.059	0.92
0.15	0.062	0.91	0.062	0.91
0.19	0.064	0.91	0.065	0.91
0.31	0.070	0.91	0.071	0.91
0.57	0.077	0.91	0.077	0.91
1.13	0.084	0.91	0.085	0.92

**Sloped roof insulation** Unilin Insulation between and under rafters 150mm/60mm

XT/CWP T&G	75mm		100mm	
	Ψ	f	Ψ	f
Inner block				
0.11	0.054	0.91	0.054	0.92
0.15	0.057	0.91	0.057	0.92
0.19	0.059	0.91	0.060	0.92
0.31	0.065	0.91	0.065	0.92
0.57	0.071	0.91	0.071	0.92
1.13	0.078	0.92	0.078	0.92

- Thermal transmittance value (W/m K)
- Temperature factor

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