



Technical competency: The Psi value (Ψ) 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**
UI-CTPIR-E15-RF-01 V1 **03-Jan-23**

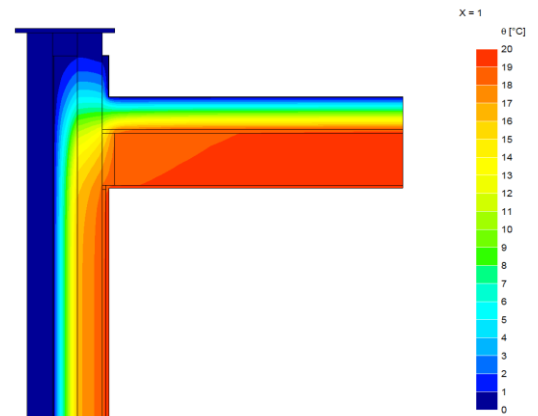
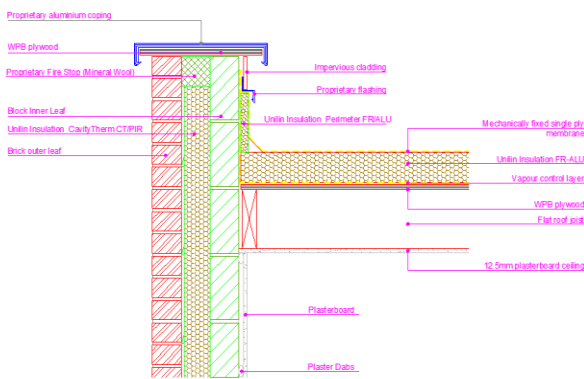
Calculation prepared by
Unilin Insulation Technical Services

General Construction Specification (Wall)
Plasterboard on dabs
Air layer & plaster adhesive
Concrete block
Unilin Insulation CavityTherm CT/PIR
Residual cavity (5mm)
Proprietary fire barrier
Brick
Table K1 reference
E15
U value range (Wall)
0.12 W/m ² K - 0.21 W/m ² K

General Construction Specification (Sloped roof)
Waterproofing membrane
Unilin Insulation FR-ALU
Vapour control layer
Plywood deck
Air layer between joists
Plasterboard
Description
Flat roof with parapet and wall junction
U value range
0.13 W/m ² K - 0.18 W/m ² K

Junction detail

Thermal image



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

Ψ 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
- EN ISO 13370 2017
- EN ISO 6946 2017
- BR 497 (Second Edition)
- BR 443 2019
- 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.



Flat roof insulation Unilin Insulation FR-ALU 120mm

CavityTherm	100mm		110mm		125mm		150mm	
	ψ	f	ψ	f	ψ	f	ψ	f
Inner block								
0.11	0.082	0.95	0.079	0.95	0.076	0.96	0.072	0.96
0.15	0.089	0.95	0.086	0.95	0.083	0.95	0.079	0.96
0.19	0.095	0.94	0.093	0.95	0.090	0.95	0.086	0.95
0.31	0.113	0.94	0.111	0.94	0.107	0.94	0.103	0.95
0.57	0.143	0.93	0.141	0.93	0.138	0.93	0.135	0.93
1.13	0.208	0.90	0.206	0.90	0.204	0.91	0.202	0.91

Flat roof insulation Unilin Insulation FR-ALU 140mm

CavityTherm	100mm		110mm		125mm		150mm	
	ψ	f	ψ	f	ψ	f	ψ	f
Inner block								
0.11	0.081	0.95	0.079	0.95	0.075	0.96	0.071	0.96
0.15	0.088	0.95	0.086	0.95	0.082	0.95	0.078	0.96
0.19	0.095	0.95	0.092	0.95	0.089	0.95	0.084	0.95
0.31	0.112	0.94	0.109	0.94	0.106	0.94	0.102	0.95
0.57	0.143	0.93	0.139	0.93	0.136	0.93	0.133	0.94
1.13	0.205	0.90	0.203	0.91	0.201	0.91	0.198	0.91

Flat roof insulation Unilin Insulation FR-ALU 160mm

CavityTherm	100mm		110mm		125mm		150mm	
	ψ	f	ψ	f	ψ	f	ψ	f
Inner block								
0.11	0.081	0.95	0.078	0.96	0.075	0.96	0.070	0.96
0.15	0.088	0.95	0.085	0.95	0.081	0.96	0.077	0.96
0.19	0.094	0.95	0.091	0.95	0.088	0.95	0.083	0.96
0.31	0.111	0.94	0.108	0.94	0.105	0.95	0.100	0.95
0.57	0.140	0.93	0.137	0.93	0.134	0.93	0.130	0.94
1.13	0.202	0.91	0.200	0.91	0.198	0.91	0.195	0.92

ψ Thermal transmittance value (W/m K)
 f Temperature factor

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