UNILIN
Technical Services from Unilin Insulation

THIN-R PLUS

Linear Thermal Transmittance (Ψ) & Temperature Factor (f)



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).

Certificate No	Date
UI-CWP-E15-RF-01 V3	31-Aug-26

Calculation prepared by
Unilin Insulation Technical Services

General Construction Specification (Wall)
Plasterboard on dabs
Air layer & plaster adhesive
Concrete block
Unilin Insulation XT/CWP T&G
Residual cavity (50mm)
Proprietary fire barrier
Brick

General Construction Specification (Flat roof)
Waterproofing membrane
Unilin Insulation FR-ALU
Vapour control layer
Plywood deck
Air layer between joists
Plasterboard

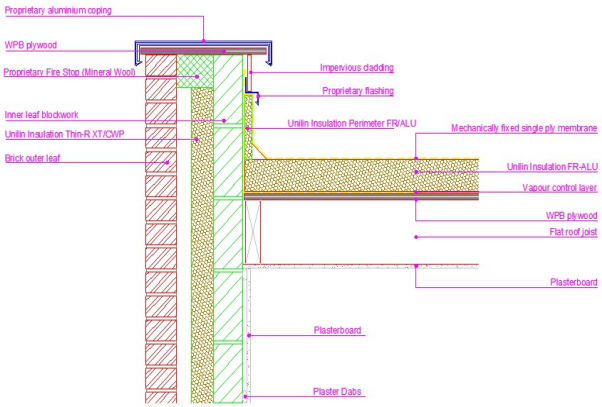
Table K1 reference
E15

Description
Flat roof with parapet and wall junction

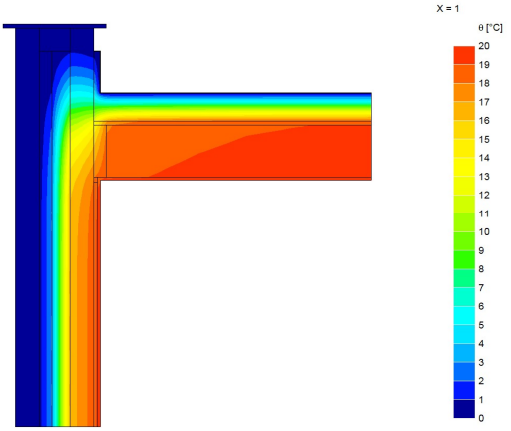
U value range (Wall)
0.15 W/m2K - 0.21 W/m2K

U value range (Flat roof)
0.11 W/m2K - 0.18 W/m2K

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	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.

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Linear Thermal Transmittance (ψ) & Temperature Factor (f)



Flat Roof Insulation	Unilin Insulation FR-ALU 120mm

XT/CWP T&G	75mm		100mm	
	Ψ	*f*	Ψ	*f*
Inner block				
0.11	0.084	0.95	0.078	0.95
0.15	0.091	0.95	0.085	0.95
0.19	0.098	0.95	0.091	0.95
0.31	0.116	0.94	0.109	0.94
0.57	0.146	0.92	0.140	0.93
1.13	0.210	0.90	0.206	0.91

Flat Roof Insulation	Unilin Insulation FR-ALU 140mm

XT/CWP T&G	75mm		100mm	
	Ψ	*f*	Ψ	*f*
Inner block				
0.11	0.084	0.95	0.077	0.95
0.15	0.091	0.95	0.084	0.95
0.19	0.097	0.95	0.090	0.95
0.31	0.115	0.94	0.108	0.94
0.57	0.144	0.92	0.138	0.93
1.13	0.207	0.90	0.202	0.91

Flat Roof Insulation	Unilin Insulation FR-ALU 160mm

XT/CWP T&G	75mm		100mm	
	Ψ	*f*	Ψ	*f*
Inner block				
0.11	0.083	0.95	0.077	0.95
0.15	0.090	0.95	0.083	0.95
0.19	0.097	0.95	0.089	0.95
0.31	0.114	0.94	0.106	0.94
0.57	0.142	0.93	0.136	0.93
1.13	0.204	0.90	0.199	0.91

Flat Roof Insulation	Unilin Insulation FR-ALU 200mm

XT/CWP T&G	75mm		100mm	
	Ψ	*f*	Ψ	*f*
Inner block				
0.11	0.083	0.95	0.075	0.96
0.15	0.089	0.95	0.082	0.96
0.19	0.095	0.95	0.088	0.95
0.31	0.112	0.94	0.104	0.95
0.57	0.139	0.93	0.132	0.94
1.13	0.198	0.91	0.192	0.91

Ψ Thermal transmittance value (W/m K)

f Temperature factor

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