

Certificate No: CBA-E24-1-S-B

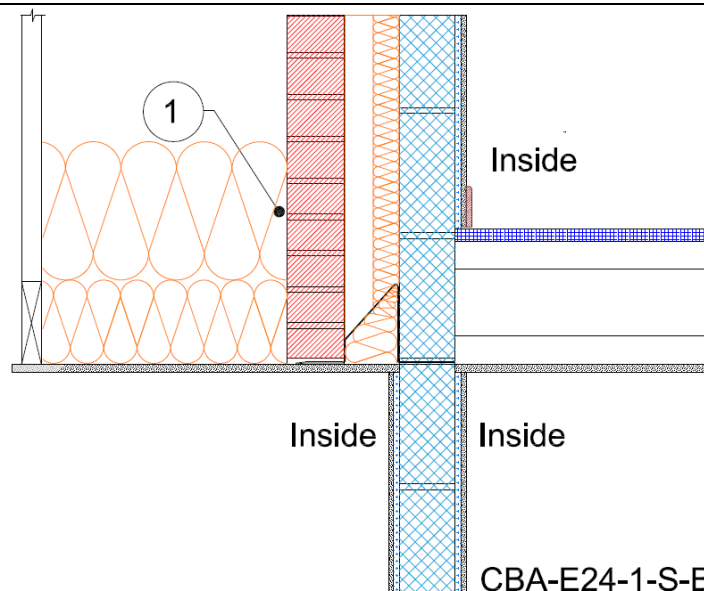
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Issued by Concrete Block Association

Eaves (Insulation at ceiling level - inverted) Table K.1 Ref E24 Default ψ -value = 0.24 W/mK	Inner leaf	100 mm Blockwork
	Cavity	Partial cavity fill with low-e facing and 50mm cavity
	Outer leaf	102 mm Brick $\lambda = 0.77$
	Lintel	Folded steel with perforated baseplate
	Roof	Pitched roof over single storey addition with doorway. 150 mm of insulation with $\lambda = 0.037$ between 45mm wide joists. 250mm over joists

Key Point

1. Ensure the roof insulation is tightly butted to the wall



Calculations have been performed in accordance with:
BS EN ISO 10211:2007, BR497 and BS EN ISO 13370:2007

Calculation prepared by : Chris Sanders B.Sc, M.Sc. GCU, Cowcaddens Rd, Glasgow G4 0BA
For more information contact 0116 232 5165 (CBA).

Calculated ψ -values and f -values for eaves (insulation at ceiling level – inverted) and cavity insulation as highlighted

1. With ultra lightweight blocks in the internal wall $\lambda = 0.28$ W/mK

Cavity Insulation	Inner leaf blockwork					
	Ultra lightweight		Lightweight		Dense	
	ψ -value W/mK	f -value	ψ -value W/mK	f -value	ψ -value W/mK	f -value
50mm $\lambda=0.022$	0.117	0.930	0.116	0.934	0.117	0.937
100mm $\lambda=0.022$	0.157	0.931	0.157	0.934	0.159	0.937

2. With lightweight blocks in the internal wall $\lambda = 0.6$ W/mK

Cavity Insulation	Inner leaf blockwork					
	Ultra lightweight		Lightweight		Dense	
	ψ -value W/mK	f -value	ψ -value W/mK	f -value	ψ -value W/mK	f -value
50mm $\lambda=0.022$	0.118	0.931	0.116	0.935	0.117	0.938
100mm $\lambda=0.022$	0.158	0.932	0.158	0.934	0.159	0.937

3. With dense blocks in the internal wall $\lambda = 1.33$ W/mK

Cavity Insulation	Inner leaf blockwork					
	Ultra lightweight		Lightweight		Dense	
	ψ -value W/mK	f -value	ψ -value W/mK	f -value	ψ -value W/mK	f -value
50mm $\lambda=0.022$	0.119	0.933	0.117	0.936	0.118	0.939
100mm $\lambda=0.022$	0.158	0.933	0.158	0.935	0.159	0.938

The f -value should be above 0.75 to minimise the risk of mould in dwellings.

On-site Checklist

1. Roof insulation is tightly butted to the wall

Signed:

Site manager/supervisor.....

Site name.....

Plot Number.....

Date.....