

U-value calculator report

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Project Reference: IG-GRP

Issued on Date: 06/12/2012

Project:

Type Ref: Flat Bay Roof

Surveyor: Stephen Harpur, Tel: 028 8224 9693

Surveyor ID: B856-0001

Address: Drumlegagh Road South, Omagh, Tyrone, BT78 5PQ

Client: IG-GRP, 106

Software Version: Elmhurst Energy Systems SAP2009 Calculator (Design System) version 3.08r12

Building Elements:

Roof Flat Bay Roof - 200mm Insulation

Roof Type: Flat Roof standard (no precipitation)

Layer	Description	Thickness	Lambda	R	Fraction
Ext surface				0.040	
Layer 1	GRP				
	Main construction	3 mm	0.200	0.015	100.00 %
Layer 2	Mineral wool quilt				
	Main construction	200 mm	0.041	4.878	98.20 %
	Bridging - Timber	200 mm	0.130		1.80 %
	Corrections - Air Gap: Level 0, Fasteners: None or plastic				
Layer 3	GRP				
	Main construction	3 mm	0.200	0.015	100.00 %
Layer 4	Plasterboard, standard				
	Main construction	12 mm	0.210	0.057	100.00 %
Int surface				0.100	
Total resistance:		Upper limit = 4.937 m ² K/W		Lower limit = 4.922 m ² K/W	Average = 4.929 m ² K/W
U-value (unrounded) = 0.2 W/m ² K					

Unheated space: None

Total thickness: 218 mm

U-value: 0.20 W/m²K

Roof Flat Bay Roof-2 - 300mm Insulation

Roof Type: Flat Roof standard (no precipitation)

Layer	Description	Thickness	Lambda	R	Fraction
Ext surface				0.040	
Layer 1	GRP				
	Main construction	3 mm	0.200	0.015	100.00 %
Layer 2	Mineral wool quilt				
	Main construction	300 mm	0.041	7.317	98.20 %
	Bridging - Timber	300 mm	0.130		1.80 %
	Corrections - Air Gap: Level 0, Fasteners: None or plastic				
Layer 3	GRP				
	Main construction	3 mm	0.200	0.015	100.00 %
Layer 4	Plasterboard, standard				
	Main construction	12 mm	0.210	0.057	100.00 %
Int surface				0.100	
Total resistance:		Upper limit = 7.285 m ² K/W		Lower limit = 7.269 m ² K/W	Average = 7.277 m ² K/W
U-value (unrounded) = 0.14 W/m ² K					

Unheated space: None

Total thickness: 318 mm

U-value: 0.14 W/m²K