

Back to Earth SW Ltd

7 Tuns Lane
Silverton
Exeter
EX5 4HY

Project Information

Reference

Date 4 December 2023

Construction Type

Element : Wall - Wall-masonry-cavity-internal-multipor

Internal surface emissivity : High External surface emissivity : High

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Pitch (°)	Bridge details Air gaps (Level, Delta U")
Outside surface resistance	-	-	0.130		
Brick outer leaf	105.0	0.770	0.000		
Airspace, heat flow horizontal, 50 mm thick	50.0	-	0.000		
Brick inner leaf	105.0	0.560	0.188		
Render, cement-sand	20.0	1.000	0.020		
Multipor Adhesive	5.0	0.180	0.028		
Multipor	80.0	0.042	1.900		L:0 0.000W/m ² K
Multipor Adhesive	5.0	0.180	0.028		
Inside surface resistance	-	-	0.130		
Total thickness	370.0mm				

U-value = 0.41W/m²K

U-value, Combined Method : 0.413W/m²K (upper/lower limit 2.424 / 2.424m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000, dUrc1 0.0000, dUrc2 0.0000)

Correction factors

Air gaps, Delta Ug = 0.000W/m²K

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Thermal Mass Details

	Thickness assessed (actual) (mm)	Density (kg/m ³)	Specific heat capacity (J/kgK)	Heat capacity (kJ/m ² K)
Brick outer leaf	0.0 (105.0)	1700.0	840.0	0.0
Airspace, heat flow horizontal, 50 mm thick	0.0 (50.0)	1.2	1008.0	0.0
Brick inner leaf	0.0 (105.0)	1700.0	840.0	0.0
Render, cement-sand	0.0 (20.0)	1800.0	1000.0	0.0
Multipor Adhesive	0.0 (5.0)	800.0	1000.0	0.0
Multipor	0.0 (80.0)	220.0	1000.0	0.0
Multipor Adhesive	5.0 (5.0)	800.0	1000.0	4000000.0
Total				4000000.0
kappa value				4.0000
Limiting condition:	insulation			

Admittance : 0.86 W/m²K Decrement : 0.13 factor Decrement delay : -11.57 hours