CERTIFICATE CS/1004-2
U Value Competency Scheme

Project ID : Online
Structure element : Solid Ground floor
Description : Solid ground floor (insulation beneath screed / concrete slab)
File reference : 1Q135R4607.FCF

Calculated 'U' value = 0.13W/m²K (Calculated in accordance with BS EN ISO 13370:2007)

Condensation risk has been assessed up to and including Level 4 Humidity Class (dwellings with high occupancy) within UK worst case environmental conditions.

Element Description	Element Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m²K/W)	Mean T (K)	Delta T (K)
Inside surface	-	-	0.170	92.95	0.39
SAND CEMENT SCREED	65.0	1.400	0.046	92.70	0.11
POLYTHENE SEPARATION LAYER	0.5	-	0.001	92.65	0.00
KOOLTHERM K103	110.0	0.018	6.111	85.60	.4.10
CONCRETE 1:2:4 2000 kg/m³	150.0	1.400	0.107	78.43	0.25
DAMP PROOF MEMBRANE	0.9	-	0.001	78.30	0.00
Ground	-	-	0.040	78.25	0.09

Ground Floor Details

Calculation method : Perimeter / Area (As defined in BRE IP 3/90)
Perimeter : 0.00m
Area : 0.00m²
P/A : 0.500
Floor type : Solid floor
Earth conductivity : 2.000W/mK
Soil type : Sand or Gravel

Detailed U-value Calculation Results

Total resistance of solid ground floor
$R_T = (R_{upper} + R_{lower}) / 2 = (6.477 + 6.477) / 2 = 6.477$ m²K/W

(Correction for mechanical fasteners, Delta Uf = 0.0000W/m²K | Correction for air gaps, Delta Ug = 0.0000W/m²K)
(Alpha 0.0 m^{-1} | Fasteners per square metre 0.0000)
(Fasteners cross-sectional area 0.000 mm² | Thermal conductivity of fastener 0.00 W/mK)

(Delta Uf + Delta Ug) is less than 3% of (1 / Rt) so U = (1 / Rt) = 0.13W/m²K

Not all insulation thicknesses shown may currently be stocked, so please check with Kingspan Insulation Customer Service Department on 01544 388601.

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