



U-Value Calculator Results

John Smith
Cogent
Construction
Heath Farm
Meriden
West Midlands

06 November, 2014

Dear John Smith,

Thank you for using the Kingspan Insulation U-Value Calculator.

The full specification for the construction you have selected and the result of your BBA approved calculation are on the next page.

To purchase the Kingspan Insulation suggested by the calculation please contact our sales team on 01544 388 601.

Our structural quick guides and product brochures, which can be found on our website kingspaninsulation.co.uk, provide more detailed information on construction build ups, sitework and installation guidance.

If you have further questions about your particular insulation requirements please contact our friendly, professional technical team on 01544 387 382.

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kingspaninsulation.co.uk

Project ID : Online
 Structure element : Solid Ground floor
 Description : Solid ground floor (insulation beneath screed / concrete slab)
 File reference : 1E11A94A2A.FCF

Calculated 'U' value = 0.11W/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	93.00	0.30
SAND CEMENT SCREED	65.0	1.400	0.046	92.80	0.08
CONCRETE 1:2:4 2000 kg/m³	150.0	1.400	0.107	92.67	0.19
POLYTHENE SEPARATION LAYER	0.5	-	0.001	92.57	0.00
KOOLTHERM K3	80.0	0.020	4.000	89.00	7.14
KOOLTHERM K3	80.0	0.020	4.000	81.85	7.14
DAMP PROOF MEMBRANE	0.9	-	0.001	78.28	0.00
Ground	-	-	0.040	78.24	0.07

Ground Floor Details

Calculation method : Perimeter / Area (As defined in BRE IP 3/90)
 Perimeter : 0.00m
 Area : 0.00m²
 P/A : 0.700
 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
 $R_T = (R_{upper} + R_{lower}) / 2 = (8.366 + 8.366) / 2 = 8.366 \text{ m}^2\text{K/W}$
 (Correction for mechanical fasteners, $\Delta U_f = 0.0000\text{W/m}^2\text{K}$ | Correction for air gaps, $\Delta U_g = 0.0000\text{W/m}^2\text{K}$)
 (Alpha 0.0 m^{-1} | Fasteners per square metre 0.0000)
 (Fasteners cross-sectional area 0.000 mm^2 | Thermal conductivity of fastener 0.00 W/mK)
 ($\Delta U_f + \Delta U_g$) is less than 3% of $(1 / R_T)$ so $U = (1 / R_T) = 0.11\text{W/m}^2\text{K}$

For further information on the specified products, e.g. literature or specification clauses, please follows the links below:-

[Kooltherm K3](#)

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

Whilst the information and/or specification contained herein is to the best of our knowledge true and accurate we specifically exclude any liability for errors, omissions or otherwise arising therefrom. Details, practices, principles, values and calculations should be verified as to accuracy and suitability for the required purpose for use.