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| CONCRETE BLOCK ASSOCIATION | **Linear Thermal Transmittance (ψ-value)**<br>**Temperature Factor (f-value)** | GCU Glasgow Caledonian University |

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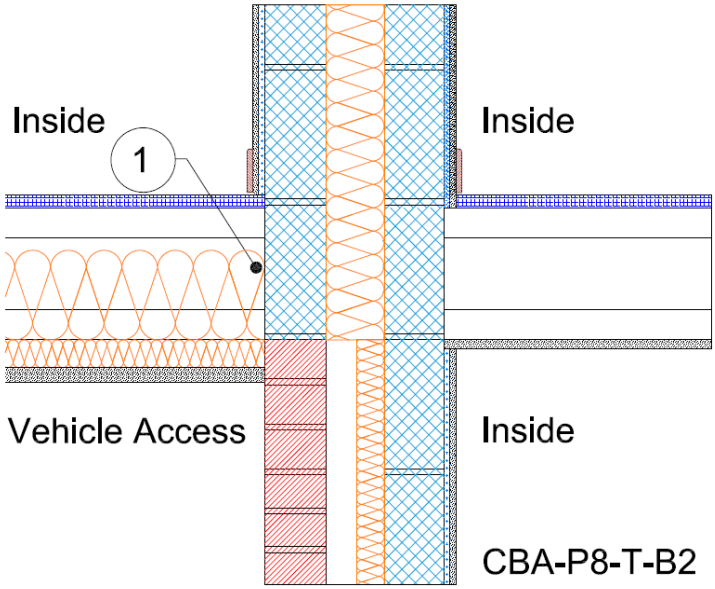
|---|---|
| **Certificate No: CBA-P8-T-B2** | **Issued : January 2016** |
| **Issued by Concrete Block Association** | |

| | | |
|---|---|---|
| **Exposed floor (Inverted)**<br>Table K.1 Ref P8<br>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 λ = 0.77 |
| | Exposed floor | Timber with 45mm wide joists on hangers over vehicle access with 150mm of insulation, λ = 0.037, between the joists and 25mm of insulation, λ = 0.022 below the joists |

**Key Point**

1. Ensure the floor 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 exposed floor (inverted) and cavity insulation as highlighted**

***The ψ-value applied to each dwelling around the junction should be allocated as follows:**

- **2 dwellings – 2/3 of tabulated value to dwelling occupying 2 segments around junction and 1/3 of tabulated value to dwelling occupying 1 segment around junction**
- **3 dwellings – 1/3 of tabulated value to each dwelling**

**1. With lightweight blocks in the separating wall λ = 0.6 W/mK**

| | Inner leaf blockwork | | | | | |
|---|---|---|---|---|---|---|
| | Ultra lightweight | | Lightweight | | Dense | |
| Cavity Insulation | ψ-*value W/mK** | *f-value* | ψ-*value W/mK** | *f-value* | ψ-*value W/mK** | *f-value* |
| 50mm λ=0.022 | 0.178 | 0.876 | 0.177 | 0.876 | 0.177 | 0.876 |
| 100mm λ=0.022 | 0.174 | 0.871 | 0.173 | 0.872 | 0.174 | 0.872 |

**2. With dense blocks in the separating wall λ = 1.33 W/mK**

| | Inner leaf blockwork | | | | | |
|---|---|---|---|---|---|---|
| | Ultra lightweight | | Lightweight | | Dense | |
| Cavity Insulation | ψ-*value W/mK** | *f-value* | ψ-*value W/mK** | *f-value* | ψ-*value W/mK** | *f-value* |
| 50mm λ=0.022 | 0.266 | 0.863 | 0.265 | 0.863 | 0.265 | 0.863 |
| 100mm λ=0.022 | 0.263 | 0.858 | 0.262 | 0.858 | 0.263 | 0.858 |

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

# On-site Checklist

1. Floor insulation is tightly butted to the wall ☐

**Signed:**

**Site manager/supervisor……..**

**Site name……..**

**Plot number……**

**Date……**