CE

SURE SIPS

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MTX-PANELS

BS EN 14509 (BSI, 2006), Sandwich concept (Diab, 2008) and Design Guide (SIP Building Systems Ltd, 2009). The assumptions of the classical sandwich panel theory are given by Davies (1993) and are listed below.

- **The faces and the inner core are linearly elastic.**
- **The deflections are small (i.e. curvature can be represented by the second derivative of the deflection as in conventional bending theory).**
- **The shear stress in the inner core is constant across its thickness.**
- **There is no slip at the interface between the core and the faces.**
- **There is no deformation of the inner core in a direction perpendicular to the faces (i.e. the inner core does not squash).**

Table 1.

Imposed loads III buildings, category (see EN 1991-1-1) Category A : domestic, residential areas									
MOEosb	3.80E+09	N/m2	Short term loading allowable spans (m) based on deflection of span/350 over a distributed load.						
MOEpur	2.90E+06	N/m2							
Psi		0.7							
Length Factor		350							
Face	SIP	Load							SIP
m		N/m2							W/m²K
Thickness		250	500	750	1000	1250	1500	1750	2000	U-Value
0.011	0.124	5.7	4.1	3.3	2.9	2.6	2.3	2.2	2.0	0.21
0.011	0.146	6.9	4.8	4.0	3.4	3.1	2.8	2.6	2.4	0.17
0.018	0.160	9.2	6.5	5.3	4.6	4.1	3.8	3.5	3.3	0.17

- ***Note: Values in Table 1 are for reference only, consult relevant Eurocode prior to the design process.***

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