

Assemblies/window types/solar protection

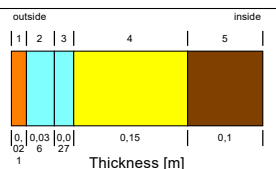
Assembly (Id.1): Lightweight timber framed wall

Homogenous layers

Thermal resistance: 5,206 m²K/W (without R_{si}, R_{se})

Heat transfer coefficient (U-value): 0,186 W/m²K

Thickness: 0,334 m



Nr.	Material/Layer (from outside to inside)	ρ [kg/m³]	c [J/kgK]	λ [W/mK]	Thickness [m]	Color
1	Scandinavian spruce transverse direction II	390	1600	0,13	0,021	Orange
2	Air Layer 40 mm	1,3	1000	0,23	0,036	Cyan
3	Air Layer 40 mm	1,3	1000	0,23	0,027	Cyan
4	Mineral Wool (heat cond.: 0,04 W/mK)	60	850	0,04	0,15	Yellow
5	Stora Enso CLT	410	1300	0,098	0,1	Brown

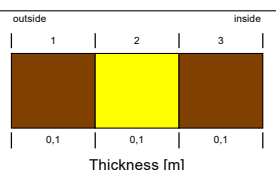
Assembly (Id.2): Vegg mellom leilighet

Homogenous layers

Thermal resistance: 4,541 m²K/W (without R_{si}, R_{se})

Heat transfer coefficient (U-value): 0,212 W/m²K

Thickness: 0,3 m



Nr.	Material/Layer (from outside to inside)	ρ [kg/m³]	c [J/kgK]	λ [W/mK]	Thickness [m]	Color
1	Stora Enso CLT	410	1300	0,098	0,1	Brown
2	Mineral Wool (heat cond.: 0,04 W/mK)	60	850	0,04	0,1	Yellow
3	Stora Enso CLT	410	1300	0,098	0,1	Brown

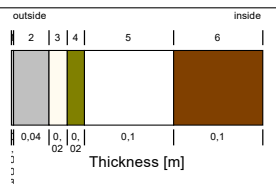
Assembly (Id.7): Himling

Homogenous layers

Thermal resistance: 1,747 m²K/W (without R_{si}, R_{se})

Heat transfer coefficient (U-value): 0,53 W/m²K

Thickness: 0,283 m



Nr.	Material/Layer (from outside to inside)	ρ [kg/m³]	c [J/kgK]	λ [W/mK]	Thickness [m]	Color
1	Linoleum nach DIN 18171	1000	1500	0,17	0,003	
2	Cement Paste w/c 0,6	1413	1000	1,7	0,04	
3	Cement Plaster (stucco, A-value: 0.51 kg/m²h0.5)	2000	850	1,2	0,02	
4	Wood-Fibre Insulation Board	155	1400	0,042	0,02	
5	Shingle	2000	1840	0,52	0,1	
6	Stora Enso CLT	410	1300	0,098	0,1	

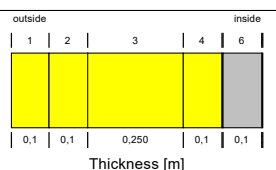
Assembly (Id.5): Gulv

Homogenous layers

Thermal resistance: 13,828 m²K/W (without R_{si}, R_{se})

Heat transfer coefficient (U-value): 0,071 W/m²K

Thickness: 0,655 m



Nr.	Material/Layer (from outside to inside)	ρ [kg/m³]	c [J/kgK]	λ [W/mK]	Thickness [m]	Color
1	EPS (heat cond.: 0.04 W/mK - density: 30kg/m³)	30	1500	0,04	0,1	
2	EPS (heat cond.: 0.04 W/mK - density: 30kg/m³)	30	1500	0,04	0,1	
3	EPS (heat cond.: 0.04 W/mK - density: 30kg/m³)	30	1500	0,04	0,25	
4	EPS (heat cond.: 0.04 W/mK - density: 30kg/m³)	30	1500	0,04	0,1	
5	PE-Membrane 0,2 mm (sd = 87 m)	130	2200	1,65	0,002	
6	Concrete w/c 0,5	2308	850	1,7	0,1	
7	Linoleum nach DIN 18171	1000	1500	0,17	0,003	

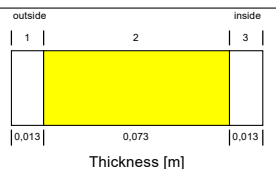
Assembly (Id.3): Vegg mellom sov sør og stue

Homogenous layers

Thermal resistance: 1,955 m²K/W (without R_{si}, R_{se})

Heat transfer coefficient (U-value): 0,451 W/m²K

Thickness: 0,099 m



Nr.	Material/Layer (from outside to inside)	ρ [kg/m³]	c [J/kgK]	λ [W/mK]	Thickness [m]	Color
1	Gypsum Plaster	1721	850	0,2	0,013	
2	Mineral Wool (heat cond.: 0,04 W/mK)	60	850	0,04	0,073	
3	Gypsum Plaster	1721	850	0,2	0,013	

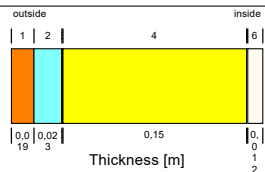
Assembly (Id.4): Lightweight timber framed wall

Homogenous layers

Thermal resistance: 4,17 m²K/W (without R_{si}, R_{se})

Heat transfer coefficient (U-value): 0,226 W/m²K

Thickness: 0,206 m



Nr.	Material/Layer (from outside to inside)	ρ [kg/m³]	c [J/kgK]	λ [W/mK]	Thickness [m]	Color
1	Spruce, radial	455	1400	0,09	0,019	Orange
2	Air Layer 25 mm	1,3	1000	0,155	0,023	Cyan
3	60 minute Building Paper	280	1500	12	0,001	Dark Red
4	Mineral Wool (heat cond.: 0,04 W/mK)	60	850	0,04	0,15	Yellow
5	PE-Membrane 0,15 mm (sd = 70 m)	130	2200	2,2	0,001	Blue
6	Gypsum Board	850	850	0,2	0,012	Beige

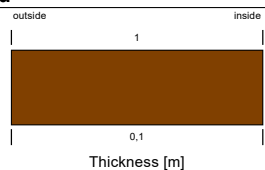
Assembly (Id.10): Vegg massivtre mellom sov sør og bad

Homogenous layers

Thermal resistance: 1,02 m²K/W (without R_{si}, R_{se})

Heat transfer coefficient (U-value): 0,781 W/m²K

Thickness: 0,1 m



Nr.	Material/Layer (from outside to inside)	ρ [kg/m³]	c [J/kgK]	λ [W/mK]	Thickness [m]	Color
1	Stora Enso CLT	410	1300	0,098	0,1	Brown

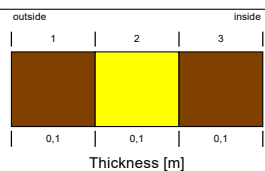
Assembly (Id.8): Vegg mellom leilighet

Homogenous layers

Thermal resistance: 4,541 m²K/W (without R_{si}, R_{se})

Heat transfer coefficient (U-value): 0,212 W/m²K

Thickness: 0,3 m



Nr.	Material/Layer (from outside to inside)	ρ [kg/m³]	c [J/kgK]	λ [W/mK]	Thickness [m]	Color
1	Stora Enso CLT	410	1300	0,098	0,1	Brown
2	Mineral Wool (heat cond.: 0,04 W/mK)	60	850	0,04	0,1	Yellow
3	Stora Enso CLT	410	1300	0,098	0,1	Brown

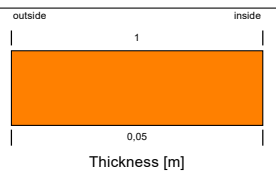
Assembly (Id.9): Dører

Homogenous layers

Thermal resistance: 0,556 m²K/W (without R_{si}, R_{se})

Heat transfer coefficient (U-value): 1,226 W/m²K

Thickness: 0,05 m



Nr.	Material/Layer (from outside to inside)	ρ [kg/m³]	c [J/kgK]	λ [W/mK]	Thickness [m]	Color
1	Softwood	400	1400	0,09	0,05	

Window type (Id 1): Example 1

U _w - installed [W/m²K]	0,79
Frame factor [-]	0,7
SHGC (short-wave radiation average) [-]	0,59
SHGC hemispherical [-]	0,59
Long wave radiation emissivity (mean glazing/frame) [-]	0,8

Solar protection (Id 1): New

Solar exposure for sunscreen device [-]	0,45
Thermal resistance solar protection [m²K/W]	0
Thermal resistance cavity [m²K/W]	0
Operation mode	Reduce overheating
Exclude weekends	No

Solar protection (Id 2): New

Solar exposure for sunscreen device [-]	0,45
Thermal resistance solar protection [m²K/W]	0
Thermal resistance cavity [m²K/W]	0
Operation mode	Reduce overheating
Exclude weekends	No

Solar protection (Id 3): New

Solar exposure for sunscreen device [-]	0,45
Thermal resistance solar protection [m²K/W]	0
Thermal resistance cavity [m²K/W]	0
Operation mode	Reduce overheating
Exclude weekends	No