

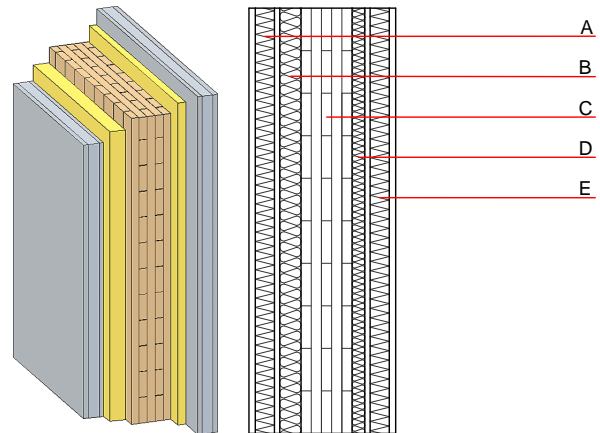
Compartment wall - twmxxo02a-01

compartment wall, solid wood construction, without dry lining, single-layer, other surface

Performance rating

Fire protection performance	REI	90
maximum ceiling height = 3 m; maximum load $E_{d,fi} = 35,0 \text{ kN/m}$ Classified by HFA		
Thermal performance	U	0.27 $\text{W}/(\text{m}^2\text{K})$
	Diffusion	suitable
Calculated by HFA		
Acoustic performance	$R_w (C;C_{tr})$	63 dB
	$L_{n,w} (C_i)$	
B= s' < 10 Assessed by TU-GRAZ		
Mass per unit area	m	133.70 kg/m^2

Calculation based on gypsum plaster board type DF



Note: Attention: Composite component (A + wood wool board + DF) self-supporting as wall covering.
 Cross laminated timber: thickness $\geq 125\text{mm}$; 5-ply at least, surface layer at least 27,5mm

Register of building materials used for this application, cross-section (from outside to inside, dimensions in mm)

	Thickness	Building material	Thermal performance				Reaction to fire EN
			λ	μ min - max	ρ	c	
A	62.5	wood wool composite boards composite member with plasterboard lining on both faces (eternal: 15 mm DF, internal: 12.5 mm A)	0.090	2 - 5	370	2.000	B
B	25.0	impact sound absorbing subflooring MW-T	0.036	1	100	1.030	A1
C	125.0	solid glued wood (e.g. cross laminated timber)	0.130	50	500	1.600	D
D	25.0	impact sound absorbing subflooring MW-T	0.036	1	100	1.030	A1
E	62.5	wood wool composite boards composite member with plasterboard lining on both faces (eternal: 15 mm DF, internal: 12.5 mm A)	0.090	2 - 5	370	2.000	B

Sustainability rating (per m^2)

Database ecoinvent

$OI3_{kon}$ 52.3

Calculated by HFA

Details of sustainability rating

Database ecoinvent

Lifecycle (Phases)	GWP [kg CO ₂ -e.]	AP [kg SO ₂ -e.]	EP [kg PO ₄ -e.]	ODP [kg R11-e.]	POCP [kg Ethen-e.]	
A1 - A3		0.234	0.099	5,01E-6	0.058	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	62.433	984.004	1046.437	867.239	21.476	888.715