

Internal wall - iwmxo02a-01

internal wall, solid wood construction, with dry lining, other surface

Performance rating

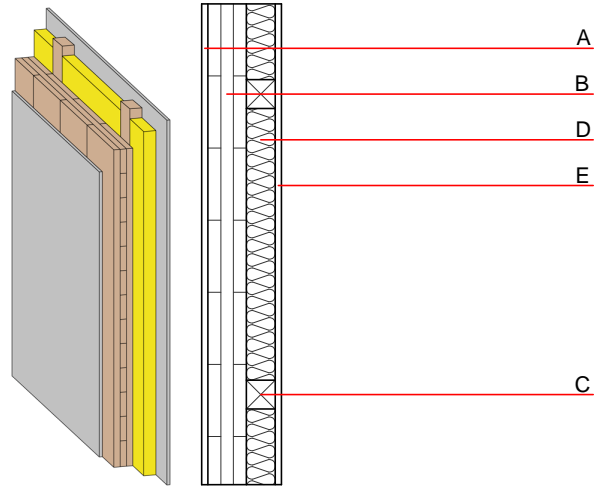
Fire protection performance REI 90

maximum ceiling height = 3 m; maximum load $E_{d,fi} = 35 \text{ kN/m}$
 Classified by HFA

Acoustic performance $R_w (C;C_{tr})$ 42 dB
 $L_{n,w} (C_i)$

Assessed by TU-GRAZ

Mass per unit area m



Note: The fire resistance is only valid when wall is used as partition with only one side exposed to fire.
 $A/E=2*12,5$

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	$\mu \text{ min - max}$	ρ	c	
A	25.0	gypsum plaster board type DF	0.250	10	800	1.050	A2
A	25.0	gypsum fibre board	0.320	21	1000	1.100	A2
B	78.0	cross laminated timber 3- or 5-ply (e.g. thickness $\geq 78\text{mm}$; 3-ply at least, surface layer at least 25mm)	0.130	50	500	1.600	D
C	60.0	spruce wood battens (60/60; e=625)	0.120	50	450	1.600	D
D	50.0	mineral wool [040; 13]	0.040	1	13	1.030	A2
E	25.0	gypsum plaster board type DF or	0.250	10	800	1.050	A2
E	25.0	gypsum fibre board	0.320	21	1000	1.100	A2

Sustainability rating (per m^2)

Database ecoinvent

$OI3_{kon}$ 24.7

Calculated with gypsum plaster fire protection board (GKF/DF); this data includes 3-, 5-, and 7-ply cross laminated timber elements;
 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		0.114	0.049	2,66E-6	0.033	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	36.330	580.689	617.018	450.735	13.401	464.136