Internal wall - iwmxxo02a-02

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

Performance rating

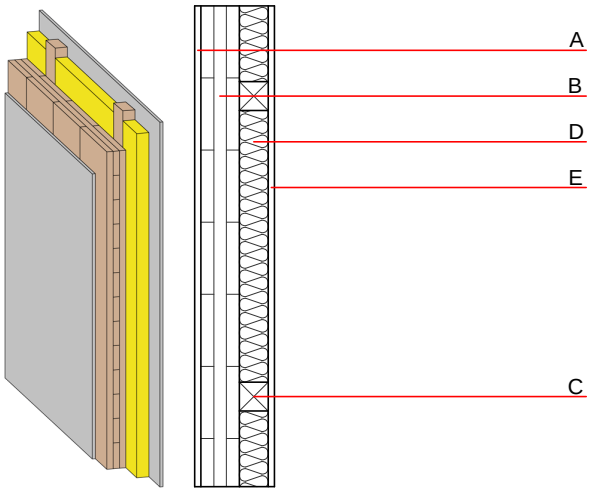
Fire protection performance	**REI**	60

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

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

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=12,5; 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
			λ	μ min – max	ρ	c	EN
A	12.5	gypsum plaster board type DF	0.250	10	800	1.050	A2
A	12.5	gypsum fibre board	0.320	21	1000	1.100	A2
B	78.0	cross laminated timber 3- or 5-ply (e.g. thickness ≥ 78mm; 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

$OI3_{Kon}$	22.4

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		0.109	0.047	2,39E-6	0.032	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	34.300	580.689	614.988	412.414	13.401	425.815