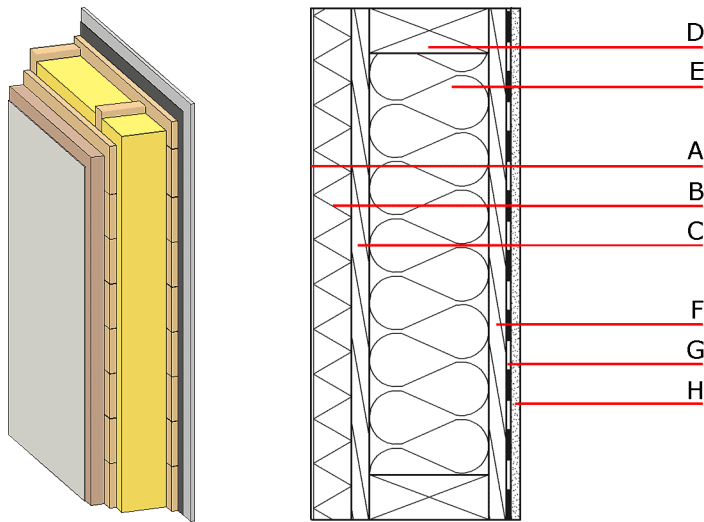


external wall - timber frame construction, not ventilated, without dry lining, with rendering



Performance rating

Fire protection performance	REI	60
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maximum ceiling height = 3 m; maximum load $E_{d,fi}$ = 32,0 kN/m

Classified by MA39

Thermal performance	U[W/(m ² K)]	0,22
	Diffusion	adequate
	$m_{w,B,A}$ [kg/m ²]	28,7

Calculated by HFA

Acoustic performance	R_w (C;C _{tr})	51 (-3; -8)
	$L_{n,w}$ (C _i)	-

Assessed by MA39

Sustainability*	Ol3 _{KON}	-15,1
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Calculated by IBO

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	4,0	plaster	1,000	10 - 35	2000	1,130	A1
B	50,0	wood wool composite boards	0,090	2 - 5	370	2,000	B
C	24,0	spruce wood closed cladding without spacing of cladding boards	0,120	50	450	1,600	D
D	160,0	finger-jointed solid construction timber (60/...; e=625)	0,120	50	450	1,600	D
E	160,0	cellulose fibre [0,040; R=55]	0,040	1 - 2	55	2,000	B
F	24,0	spruce wood closed cladding without spacing of cladding boards	0,120	50	450	1,600	D
G		vapour barrier sd \geq 7m				1000	
H	12,5	gypsum plasterboards with improved properties at high temperatures (fire) or	0,250	10	800	1,050	A2
H	12,5	gypsum fibre board	0,320	21	1000	1,100	A2

*Details of sustainability rating

GWP [kg CO ₂ Äqv.]	AP [kg SO ₂ Äqv.]	PEI ne [MJ]	PEI e [MJ]	EP [kg PO ₄ Äqv.]	POCP [kg C ₂ H ₄ Äqv.]
-50,2	0,131	364,5	842,8	0,019	0,007

Mass per unit area

m [kg/m ²]	calculation based on
73,50	gypsum plasterboard (DF)