External wall - awropo09a-12

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

Performance rating

Fire protection performance	REI from inside	60
	REI from outside	60

maximum ceiling height = 3 m; maximum load $E_{d,fi}$ = 32,0 kN/m

Classified by HFA
Classified by HFA

Germany
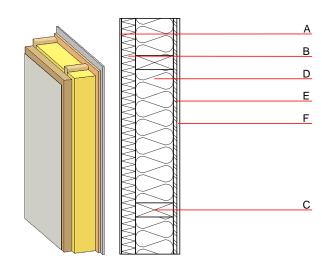
F60 (from inside/from outside)

Load $E_{d,fi}$ according to the German certification document

Corresponding proof: manufacturer-specific

Thermal performance	**U**	0.17 W/(m^{2}K)
	Diffusion	suitable
Calculated by TUM		

Acoustic performance	R_w (C;C$_{tr}$)	51(-3;-11) dB
	$L_{n,w}$ (C$_I$)	
Assessed by Müller-BBM		

Mass per unit area	**m**	59.80 kg/m^2

Calculation based on gypsum plaster board type DF

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	7.0	plaster	1.000	10 - 35	2000	1.130	A1
B	60.0	wood-fibre insulation board WF-PT [045; 180]	0.045	5 - 7	180	2.100	E
C	200.0	construction timber (60/..; e=625)	0.120	50	450	1.600	D
D	200.0	mineral wool [040; 30; ≥1000°C]	0.040	1	30	1.030	A1
E	15.0	OSB (sealed with airtight tape)	0.130	200	600	1.700	D
F	12.5	gypsum plaster board type DF or	0.250	10	800	1.050	A2
F	12.5	gypsum fibre board	0.320	21	1000	1.100	A2

Sustainability rating (per m^2)

Database ecoinvent

OI3$_{Kon}$	38.5
Calculated by HFA	

Database GaBi (ÖKOBAUDAT)

Built-in renewable materials	kg	32.260
Biogenic carbon in kg CO$_2$-e.	kg CO$_2$	47.480
Energy use of Primary Energy	MJ	577.170
Share of renewable PE	%	29.13
Calculated by TUM		

---

dataholz.eu – Catalogue of timber building materials, components and component connections reviewed to consider thermal, acoustic, fire performance requirements and ecological drivers for timber construction released by accredited testing institutes.
These datasheets will generally be accepted as proofs of compliance by building authorities.

dataholz.eu

Designation: awropo09a-12
Last updated: 8/2/23
Source: Holzforschung Austria
Editor: HFA, PLB

Page 2

Details of sustainability rating

Database ecoinvent

Lifecycle	GWP	AP	EP	ODP	POCP	
(Phases)	[kg CO_2-e.]	[kg SO_2-e.]	[kg PO_4-e.]	[kg R11-e.]	[kg Ethen-e.]	
A1 - A3		0.173	0.065	2,65E-6	0.046	

Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]
A1 - A3	94.307	549.748	644.055	522.794	34.612	557.407

Database GaBi (ÖKOBAUDAT)

Lifecycle	GWP	AP	EP	ODP	POCP	
(Phases)	[kg CO_2-e.]	[kg SO_2-e.]	[kg PO_4-e.]	[kg R11-e.]	[kg Ethen-e.]	
A1 - A3		0.106	0.018	6,66E-7	0.020	
C1 - C4		0.003	0.002	4,62E-8	0.000	
A1 - C4		0.112	0.020	7,20E-7	0.020	

Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]
A1 - A3	166.765	476.835	644.368	391.127	27.494	418.710
C1 - C4	0.964	-470.548	-469.422	11.658	-17.032	-3.170
A1 - C4	168.115	6.545	175.795	409.057	10.513	425.220

dataholz.eu – Catalogue of timber building materials, components and component connections reviewed to consider thermal, acoustic, fire performance requirements and ecological drivers for timber construction released by accredited testing institutes.
These datasheets will generally be accepted as proofs of compliance by building authorities.

Page 2