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Designation: Last updated: Source: Editor: awrhhi04a-03 8/2/23 Holzforschung Austria HFA, SP

External wall - awrhhi04a-03

external wall, timber frame construction, ventilated, with dry lining, with cladding, other surface

Performance rating

Fire protection performance	REI from inside REI from outside	60 30
maximum ceiling height = Classified by MA39 Classified by HFA	3 m; maximum load E _{d,fi} =	÷ 19,2 kN∕m
Thermal performance	U Diffusion	0.18 W∕(m ² K) suitable
Calculated by HFA		
Acoustic performance	R _w (C;C _{tr}) L _{n,w} (C _l)	51(-3;-10) dB
	1	ructural timber together with to the ledger beams will result

A B C C E F G G H I D

vertical battens for the dry lining screwed directly onto the ledger beams wi in Rw(C;Ctr)=44(-1;-5) Assessed by MA39

Mass per unit area m 44.30 kg/m²

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 per	formance			Reaction to fire
			λ	µ min – max	ρ	с	EN
Ą	24.0	larch wood external wall cladding	0.155	150	600	1.600	D
В	30.0	spruce wood battens offset (30/50; 30/80) - ventilation	0.120	50	450	1.600	D
С	15.0	fibreboard (MDF)	0.140	11	600	1.700	D
D	200.0	construction timber (60/; e=625)	0.120	50	450	1.600	D
E	200.0	mineral wool [040; ≥16; <1000 °C]	0.040	1	16	1.030	A1
F	15.0	OSB	0.130	200	600	1.700	D
G	40.0	spruce wood cross battens (a=400) resp. battens offset	0.120	50	450	1.600	D
Η	40.0	mineral wool [040; ≥16; <1000 °C]	0.040	1	16	1.030	A1
	12.5	gypsum plaster board type DF or	0.250	10	800	1.050	A2
	12.5	gypsum fibre board	0.320	21	1000	1.100	A2

Sustainability rating (per m²)

Database ecoinvent

OI3_{Kon}

Calculated by HFA

25.7

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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		0.134	0.059	2,22E-6	0.026	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[M]	[LM]	[LM]	[M]	[LM]
A1 - A3	129.308	736.891	866,199	436.766	28.891	465.658

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.