Intermediate floor - gdrnxa01b-09
intermediate floor, timber frame construction, suspended, wet, without filling, other surface

Performance rating

Fire protection performance	REI	60

maximum span = 5 m; maximum load $E_{d,fi}$ = 3,66 kN/m²
Classified by HFA

Thermal performance	U	0.27 W/(m²K)
	Diffusion	suitable

Calculated by HFA

Acoustic performance	R_w (C;C_{tr})	63(-3;-8) dB
	$L_{n,w}$ (C_l)	59(-1)

EPS-F with a dynamic stiffness of s' ≤ 40MN/m³.
Assessed by TGM

Mass per unit area	m	150.80 kg/m²

Calculation based on GF

Note: e=625

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	50.0	anhydrite screed or cement screed	0.700	10	2200	1.300	A1
B		plastic separation layer	0.200	100000	1400	1.400	E
C	30.0	Polystyrene EPS-W [0,041]	0.041	20 - 50	15	1.450	E
D	18.0	OSB	0.130	200	600	1.700	D
E	220.0	construction timber (80/..; e=*)	0.120	50	450	1.600	D
F	100.0	mineral wool [040; ≥16; <1000℃]	0.040	1	16	1.030	A1
G	24.0	spruce wood cladding with spacing of cladding boards(24/100); a=400	0.120	50	450	1.600	D
H	27.0	resilient channel (placed between open formwork)	0.156				
I	25.0	gypsum plaster board type DF (2x12,5 mm) or	0.250	10	800	1.050	A2
I	25.0	gypsum fibre board (2x12,5 mm)	0.320	21	1000	1.100	A2

Sustainability rating (per m²)

Database ecoinvent

OI3$_{Kon}$	33.4

Calculated by HFA

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.

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Designation: gdrnxa01b-09
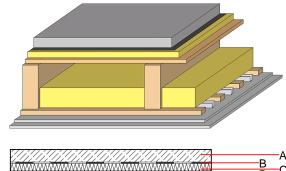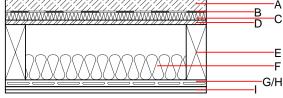Last updated: 8/2/23
Source: Holzforschung Austria
Editor: HFA, SP

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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		0.128	0.061	2,32E-6	0.027	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	102.378	435.899	538.277	488.058	33.032	521.090

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