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Intermediate floor - gdrnxa07b-04
intermediate floor, timber frame construction, suspended, wet, with filling, other surface

Performance rating

Fire protection performance **REI** 60

maximum span = 5 m; maximum load $E_{d,fi}$ = 3,66 kN/m² (without floor construction; with ceiling beam 80/200)
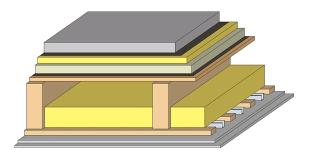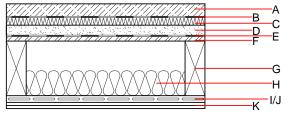Classified by IBS
Classified by HFA

Germany

F60

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

Corresponding proof: DIN 4102-4:2016-05, Tabelle 10.11, Zeile 4

Thermal performance	**U**	0.26 W/(m²K)
	Diffusion	suitable

Calculated by HFA

Acoustic performance	R_w (C;C_{tr})	70(-1;-6) dB
	$L_{n,w}$ (C_I)	41(1)

Assessed by TGM
Assessed by Müller-BBM

Mass per unit area	**m**	223.70 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 performance				Reaction to fire
			λ	μ min − max	ρ	c	EN
A	50.0	cement screed or anhydrite screed	1.330	50 - 100	2000	1.080	A1
B		plastic separation layer	0.200	100000	1400	1.400	E
C	30.0	impact sound absorbing subflooring MW-T [s'=10 MN/m³]	0.035	1	68	1.030	A1
D	40.0	fill loose	0.700	1	1800	1.000	A1
E		trickling protection					E
F	18.0	OSB	0.130	200	600	1.700	D
G	220.0	construction timber (80/..; e=625)	0.120	50	450	1.600	D
H	100.0	mineral wool [040; 30; ≥1000°C]	0.040	1	30	1.030	A1
I		spruce wood cladding with spacing of cladding boards(24/100); a=400	0.120	50	450	1.600	D
J	27.0	resilient channel placed between cladding with spacing	0.156				
K	25.0	gypsum plaster board type DF (2x...) or	0.250	10	800	1.050	A2
K	25.0	gypsum fibre board (2x...)	0.320	21	1000	1.100	A2

Sustainability rating (per m²)

Database ecoinvent

OI3$_{Kon}$ 42.1

Calculated by HFA

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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		0.171	0.076	2,74E-6	0.039	

Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]
A1 - A3	109.056	455.553	564.608	572.267	20.654	592.920

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		0.140	0.021	8,45E-7	0.023	
C1 - C4		0.017	0.005	8,47E-8	0.002	
A1 - C4		0.163	0.027	9,45E-7	0.024	

Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]
A1 - A3	145.971	488.396	635.794	526.329	53.782	580.247
C1 - C4	2.692	-476.814	-472.983	28.841	-7.731	36.710
A1 - C4	149.427	12.101	164.577	566.305	46.156	636.336

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