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Designation: gdrnxa05b-09
Last updated: 8/2/23
Source: Holzforschung Austria
Editor: HFA, PLB

Intermediate floor - gdrnxa05b-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 (without floor construction and 12mm OSB; with ceiling beam 80/200)
Classified by IBS
Classified by HFA

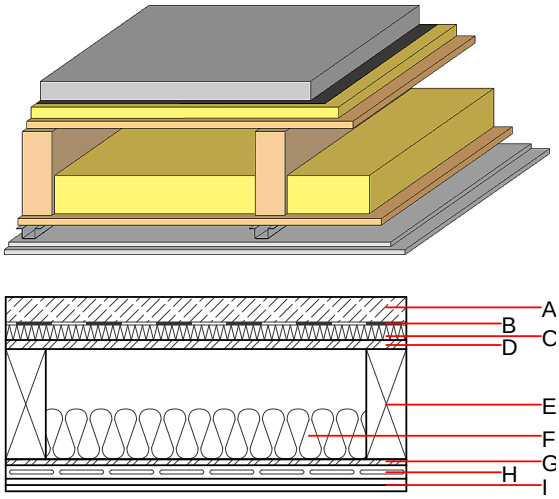
Thermal performance	**U**	0.26 W/(m²K)
	Diffusion	suitable

Acoustic performance	**R_w ($C;C_{tr}$)**	55(-4;-10) dB
	$L_{n,w}$ (C_I)	70(0)

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

Mass per unit area	**m**	169.50 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	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=625)	0.120	50	450	1.600	D
F	100.0	mineral wool [040; ≥16; <1000°C]	0.040	1	16	1.030	A1
G	12.0	OSB	0.130	200	600	1.700	D
H	27.0	resilient channel					
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

$OI3_{Kon}$	36.0

Calculated by HFA

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		0.149	0.070	2,65E-6	0.034	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	143.706	653.343	797.049	557.760	41.704	599.464