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Designation: gdmnxa02a-02
Last updated: 8/2/23
Source: Holzforschung Austria
Editor: HFA, PLB

Intermediate floor - gdmnxa02a-02

intermediate floor, solid wood construction, suspended, wet, with filling, other surface

Performance rating

Fire protection performance	**REI**	60

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

Thermal performance	**U**	0.25 W/(m²K)
	Diffusion	suitable

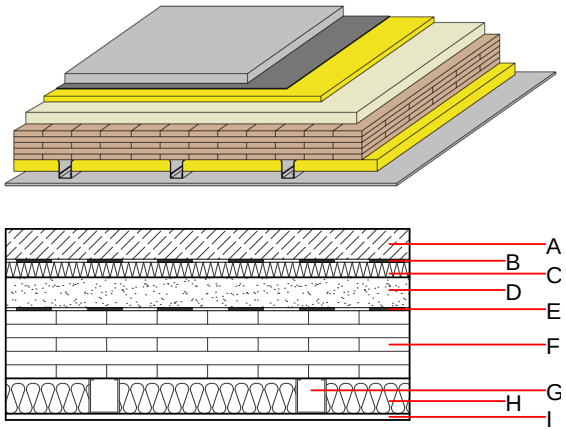
Calculated by HFA

Acoustic performance	**R_w ($C;C_{tr}$)**	62(-2;-6) dB
	$L_{n,w}$ (C_I)	46(2)

Assessed by TU-GRAZ

Mass per unit area	**m**	307.00 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	60.0	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]	0.033	1	70	1.030	A1
D	60.0	non-bonded chippings	0.700	1	1700	1.000	A1
E		trickling protection					E
F	140.0	cross laminated timber ≥ 140,0; at least 5-layers, top layer at least 26 mm)	0.130	50	500	1.600	D
G	70.0	acoustic hanger (suspension); e=410					
H	60.0	mineral wool [040; 20]	0.040	1	20	1.030	A2
I	12.5	gypsum plaster board type DF or	0.250	10	800	1.050	A2
I	12.5	gypsum fibre board	0.320	21	1000	1.100	A2

Sustainability rating (per m²)

Database ecoinvent

$OI3_{Kon}$	58.7

calculated with gypsum plaster fire protection board (GKF/DF); this data includes 3-, 5-, and 7-ply cross laminated timber elements;
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		0.261	0.120	4,46E-6	0.066	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	62.096	957.600	1019.696	890.116	31.697	921.813