

Designation: gdrtxa03a-03 Last updated: 8/2/23

Source: Holzforschung Austria

Editor: HFA, SP

Intermediate floor - gdrtxa03a-03

intermediate floor, timber frame construction, suspended, dry, without filling, other surface

Performance rating

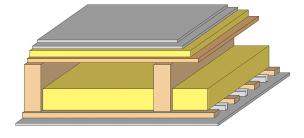
Fire protection

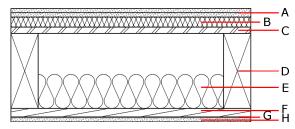
Mass per unit area

Calculation based on GF

 $\begin{array}{c} \textbf{performance} \\ \textbf{maximum span} = 5 \text{ m; maximum load } E_{d,fi} = 3,66 \text{ kN/m}^2 \\ \textbf{Classified by HFA} \\ \hline \textbf{Thermal performance} & \textbf{U} & 0.25 \text{ W/(m}^2\text{K)} \\ \textbf{Diffusion} & \text{suitable} \\ \hline \textbf{Calculated by HFA} \\ \hline \textbf{Acoustic performance} & \textbf{R}_{\textbf{w}} \textbf{ (C;C}_{\textbf{tr}}) & 63(-2;-9) \text{ dB} \\ \textbf{L}_{\textbf{n,w}} \textbf{ (C_{\textbf{l}})} & 52(4) \\ \hline \textbf{Assessed by TGM} \\ \end{array}$

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Note: e=625;

Register of building materials used for this application, cross-section (from outside to inside, dimensions in mm)

 $65.30~\textrm{kg/m}^{2}$

	Thickness	Building material	Thermal pe	rformance			Reaction to fire
			λ	μ min – max	ρ	С	EN
Α	25.0	dry screed	0.210	8	900	1.050	A1
В	30.0	impact sound absorbing subflooring MW-T	0.035	1	68	1.030	A1
С	18.0	OSB	0.130	200	600	1.700	D
D	220.0	construction timber (80/; e=*)	0.120	50	450	1.600	D
Е	100.0	mineral wool [035; 50; <1000°C]	0.035	1	50	1.030	A1
F	24.0	spruce wood cladding with spacing of cladding boards(24/100); $a=400$	0.120	50	450	1.600	D
G	27.0	resilient channel (placed between open formwork)	0.156				
Н	12.5	gypsum plaster board type DF or	0.250	10	800	1.050	A2
Н	12.5	gypsum fibre board	0.320	21	1000	1.100	A2

Sustainability rating (per m²)

Database ecoinvent Ol3_{Kon} 42.7 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.



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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		0.181	0.072	2,97E-6	0.043	
C.C		1	1			
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]