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Designation: ddmxxi01a-01
Last updated: 8/2/23
Source: Holzforschung Austria
Editor: HFA, PLB

Floor towards attic (uninhabitable) - ddmxxi01a-01

floor towards attic (uninhabitable), solid wood construction, not suspended, dry, other surface

Performance rating

Fire protection performance	**REI**	60

maximum span = 5 m; maximum load $E_{d,fi}$ = 0,6 kN/m²
Classified by HFA

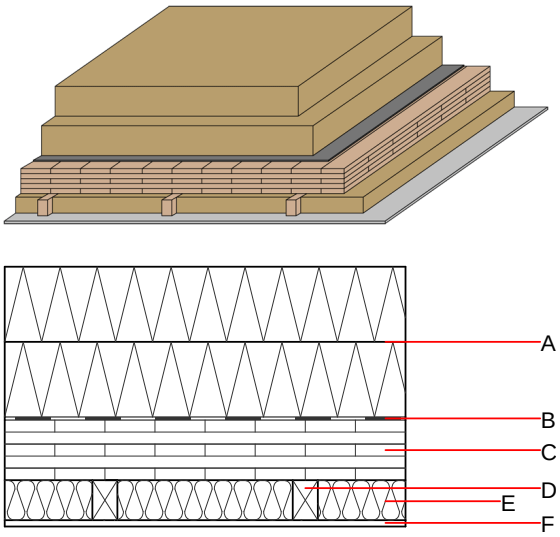
Thermal performance	**U**	0.10 W/(m²K)
	Diffusion	suitable

Acoustic performance	**R_w ($C;C_{tr}$)**	44 dB
	$L_{n,w}$ (C_I)	

Assessed by HFA

Mass per unit area	**m**	126.50 kg/m²

Calculation based on gypsum plaster board type DF



Note: A: pressure-resistant

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	300.0	wood-fibre insulation board [0,045; R=160]	0.045	5 - 7	160	2.100	E
B		foil (air tight)					
C	125.0	cross laminated timber ≥ 125mm; 5-ply at least, surface layer at least 27,5	0.130	50	500	1.600	D
D	80.0	spruce wood battens (50/80; e=400)	0.120	50	450	1.600	D
E	80.0	Wood fibre insulation [039; 45]	0.039	1 - 2	45	2.100	E
F	19.0	3-ply solid wood panel	0.110	50	400	2.500	D

Sustainability rating (per m²)

Database ecoinvent

$OI3_{Kon}$	75.0

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		0.362	0.159	6,74E-6	0.081	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	236.572	2012.936	2249.508	1291.782	129.083	1420.866