Flat roof - fdrobo01a-01

flat roof, timber frame construction, not ventilated, without dry lining, directly, wooden surface

Performance rating

Fire protection performance	REI	60

maximum span = 5 m; maximum load Ed,fi = 2,6 kN/m²
Classified by HFA

Thermal performance	U	$0.17 \ W/(m^2 K)$
	Diffusion	

Attention: Due to the application of a moisture-adaptive vapour barrier an object-related proof according to protection against moisture (diffusion) is mandatory. A hygrothermic simulation is necessary (e.g. WUFI)
Calculated by HFA

Acoustic performance	R_w (C;C_{tr})	38 dB
	$L_{n,w}$ (C_l)	

Assessed by HFA

Mass per unit area	m	$42.50 \ kg/m^2$
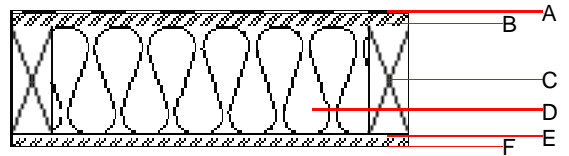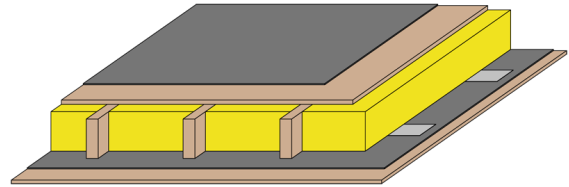
Note: ATTENTION: Regarding protection against moisture an object-related proof in terms of paramter like e.g. climate, shading class etc. is required. Therfore a hygrothermic simulation is necessary (e.g.WUFI), a simple Glaser calculation ist not allowed.

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		Plastic roofing membrane					E
B	25.0	OSB	0.130	200	600	1.700	D
C	240.0	construction timber (80/..; e=800)	0.120	50	450	1.600	D
D	240.0	mineral wool [040; 33; ≥1000°C] with metal strip to retain the insulation in case of fire (0,63/100 mm; e=500)	0.040	1	33	1.030	A1
E		moisture-adaptive vapour retarder					E
F	18.0	OSB	0.130	200	600	1.700	D

Sustainability rating (per m²)

Database ecoinvent

OI3$_{Kon}$	35.4

Connection joint and screws are disregarded
Calculated by HFA

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dataholz.eu

Designation: fdrobo01a-01
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Editor: HFA, PLB

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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		0.161	0.052	2,66E-6	0.053	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	113.065	567.408	680.473	445.050	101.136	546.186

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.

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