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Designation: fdrobo02a-00
Last updated: 8/2/23
Source: Holzforschung Austria
Editor: HFA, PLB

Flat roof - fdrobo02a-00

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

Performance rating

Fire protection performance	**REI**	60

maximum span = 5 m; maximum load Ed,fi = 4,0 kN/m²
Classified by HFA

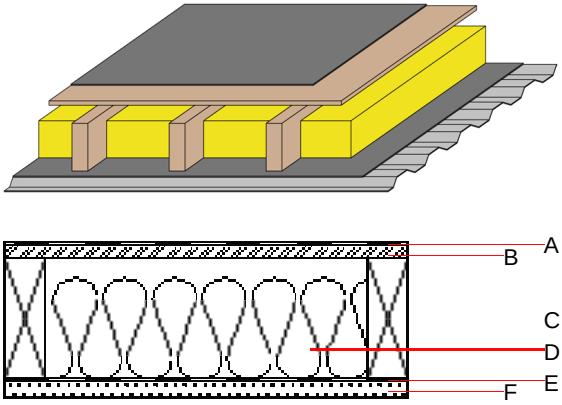
Thermal performance	**U**	0.22 W/(m²K)
	Diffusion	

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 ($C;C_{tr}$)**	33 dB
	$L_{n,w}$ (C_I)	

Assessed by HFA

Mass per unit area	**m**	50.80 kg/m²



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 (80/240; e=625)	0.120	50	450	1.600	D
D	204.0	mineral wool [040; 33; ≥1000°C]	0.040	1	33	1.030	A1
E		moisture-adaptive vapour retarder					E
F	32.0	perforated trapezoidal metal sheet					E

Sustainability rating (per m²)

Database ecoinvent

$OI3_{Kon}$	47.0

Connection joint and screws are disregarded
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		0.201	0.073	2,94E-6	0.062	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	96.608	432.864	529.472	543.585	88.127	631.712