

Designation: awropi21a-03 Last updated: 8/2/23

Source: Knauf Insulation GmbH

Editor: HFA, PLB

# External wall - awropi21a-03

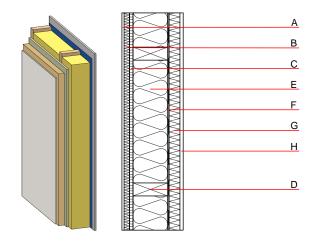
external wall, timber frame construction, not ventilated, with dry lining, with rendering, other surface

#### Performance rating

Fire protection REI from inside 60 performance maximum ceiling height = 3 m; maximum load  $E_{d,fi}$  = 19,2 kN/m Classified by HFA

Thermal performance	U Diffusion	0.16 W/(m <sup>2</sup> K) suitable		
Calculated by HFA				
Acoustic performance	R <sub>w</sub> (C;C <sub>tr</sub> ) L <sub>n,w</sub> (C <sub>l</sub> )	53(-3;-11) dB		
Assessed by TGM				
Mass per unit area	m	88.40 kg/m²		
Calculation based on ovn	sum plaster hoard type DE			

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 pe	rformance			Reaction to fire
			λ	μ min – max	ρ	С	EN
Α	10.0	plaster	1.000	10 - 35	2000	1.130	A1
В	25.0	Heraklith BM	0.090	2 - 5	370	2.000	В
С	16.0	particleboard P5	0.130	50 - 100	700	1.700	D
D	240.0	construction timber (60/; e=625)	0.120	50	450	1.600	D
Е	240.0	Heralan KP	0.040	1	28	1.030	A1
F		vapour barrier sd≥ 9m			1000		
G	50.0	Heraklith BM	0.090	2 - 5	370	2.000	В
Н	15.0	gypsum plaster board type DF	0.250	10	800	1.050	A2

## Sustainability rating (per m<sup>2</sup>)

Database ecoinvent

Ol3<sub>Kon</sub> 40.7

Calculated by HFA



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## Details of sustainability rating

#### Database ecoinvent

Lifecycle	GWP	AP	EP	ODP	POCP	
(Phases)	[kg CO <sub>2</sub> -e.]	[kg SO <sub>2</sub> -e.]	[kg PO <sub>4</sub> -e.]	[kg R11-e.]	[kg Ethen-e.]	
A1 - A3		0.176	0.060	2,64E-6	0.052	
Lifecycle	PERE	PERM	PERT	PENRE	PENRM	PENRT
(Phases)	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]	[MJ]
A1 - A3	67.269	507.400	574.669	542.041	29.823	571.865