08 DETTAGLI TECNICI sistema strutturale

D External wall

Performance rating

Fire protection performance	F	60
	REI	60
with static proof based on the remaining cross section 44/152mm		
Thermal performance	U [W/m²K]	0,22
	Diffusion adequate	adequate
	mw, B,A [kg/m²]	28,0
Acoustic performance	Rw (C;Ctr)	51(-2;-8)
	DnT,w (C;Ctr)	n.r.
Battens for the ventilation space screwed onto the structural timber together with vertical battens for the dry lining screwed directly on to the ledger beams will result in Rw(C;Ctr)=44(-1;-5) dB		
Sustainability*	GWPtot	-11,9

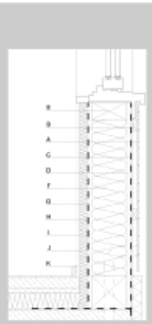
Register of building materials used for this application (from outside to inside, dimensions in mm)

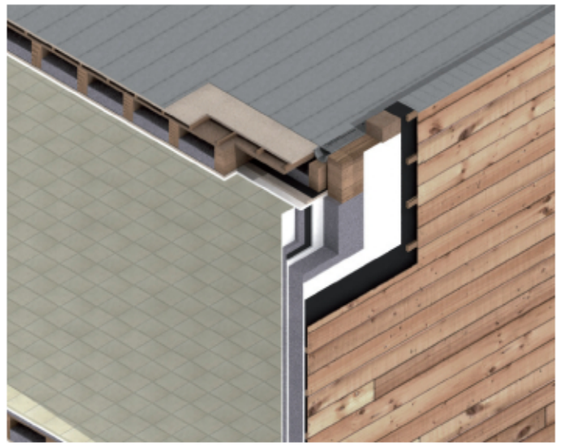
	Thickness	Building material	λ [W/mK]	μ [-] min - max	ρ [kg/m³]	c [J/kgK]	Reaction to fire DIN	EN
A	20,0	larch wood external wall cladding	0,130	60	600	1,600	B2	D
B	30,0	spruce wood battens ofhed (.60/60; 30/60) - ventilated wind barrier	0,130	60	600	1,600	B2	D
C			1000					
D	20,0	gypsum fibre board (2x10 mm)	0,320	21	1000	1,100	A	A2
E	160,0	finger-jointed solid construction timber (600 .. e=625)	0,130	60	500	1,600	B2	D
F	160,0	cellulose fibre [0,040; R=55]	0,040	1 - 2	55	2,000	B2	B
G		vapour barrier sd~4m	1000					
H	12,5	gypsum fibre board	0,320	21	1000	1,100	A	A2
I	40,0	spruce wood cross battens (e=400) or battens offset)	0,130	50	500	1,600	B2	D
J	40,0	cellulose fibre [0,040; R=55] or air layer in type 02	0,040	1 - 2	55	2,000	B2	B
K	12,5	gypsum fibre board 02	0,320	21	1000	1,100	A	A2
K	12,5	gypsum plasterboards with improved properties at high temperatures (fire)	0,250	10	900	1,050	B1	A2

* Details of sustainability rating

PEI n.R.[MJ]	PEI e[MJ]	PEI t[MJ]	GWPtot [kg CO2/kg]	AP [kg SO2/kg]	EP [kg PO4/kg]	POCP [kg C2H4/kg]	ODP [kg R11/kg]
-48,9	8.131	444,2	859,8	0,319	0,806		

* Mass per unit area: 82,9 kg/m² — calculation based on gypsum fibre board





B Intermediate floor

Performance rating

Fire protection performance	F	60
	REI	60
Thermal performance	U [W/m²K]	0,20
	Diffusion adequate	adequate
	mw, B,A [kg/m²]	27,9
Acoustic performance	Rw (C;Ctr)	51(-2;-8)
	Ln,w (Ci)	66 (0)
Sustainability*	GWPtot	-8,5

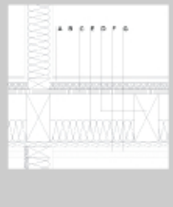
Register of building materials used for this application

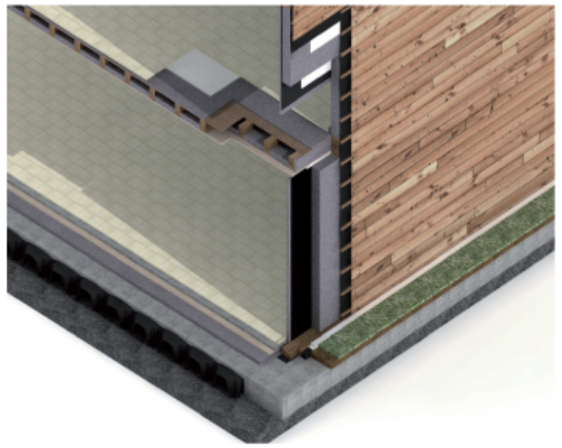
	Thickness	Building material	λ [W/mK]	μ [-] min - max	ρ [kg/m³]	c [J/kgK]	Reaction to fire DIN	EN
A	25,0	dry screed	0,210	0	900	1,050	A	A1
B	38,0	impact sound absorbing subflooring WM-T	0,035	1	80	1,030	A	A1
C	19,0	particleboard	0,130	50 - 100	700	1,700	B2	D
D	220,0	finger-jointed solid construction timber (BSH; e=625)	0,130	50	500	1,600	B2	D
E	180,0	cellulose fibre [0,040; R=60]	0,040	1 - 2	55	2,000	B2	B
F	24,0	spruce wood cladding with spacing of cladding boards(24/108): e=400	0,130	50	500	1,600	B2	D
G	28,0	gypsum plasterboards with improved properties at high temperatures (fire) (2x12,5 mm) or	0,250	10	900	1,050	B1	A2
G	25,0	gypsum fibre board (2x10 mm)	0,320	21	1000	1,100	A	A2

* Details of sustainability rating

PEI n.R.[MJ]	PEI e[MJ]	PEI t[MJ]	GWPtot [kg CO2/kg]	AP [kg SO2/kg]	EP [kg PO4/kg]	POCP [kg C2H4/kg]	ODP [kg R11/kg]
-56,1	0,105	571,0	780,5	0,309	0,909		

* Mass per unit area: 77,3 kg/m² — calculation based on gypsum fibre board





C internal wall

Fire protection performance	F	60
	REI	60
with static proof based on the remaining cross section 39/99mm		
Thermal performance	U [W/m²K]	
	Diffusion adequate	
	mw, B,A [kg/m²]	17,9
Acoustic performance	Rw (C;Ctr)	--
	Ln,w (Ci)	--
Sustainability*	GWPtot	-23,8

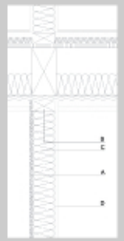
Register of building materials used for this application (dimensions in mm)

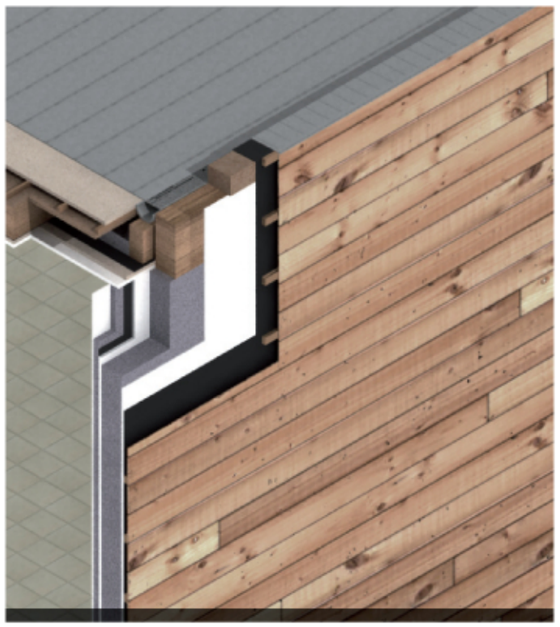
	Thickness	Building material	λ [W/mK]	μ [-] min - max	ρ [kg/m³]	c	Reaction to fire DIN	EN
A	15,0	gypsum fibre board	0,320	21	1000	1,100	A	A2
B	100,0	finger-jointed solid construction timber (60/100 or 60/160; e=625)	0,130	50	500	1,600	B2	D
C	100,0	cellulose fibre [0,040; R=55]	0,040	1 - 2	55	2,000	B2	B
D	15,0	gypsum fibre board	0,320	21	1000	1,100	A	A2

* Details of sustainability rating

PEI n.R.[MJ]	PEI e[MJ]	PEI t[MJ]	GWPtot [kg CO2/kg]	AP [kg SO2/kg]	EP [kg PO4/kg]	POCP [kg C2H4/kg]	ODP [kg R11/kg]
-11,0	0,052	224,0	270,1	0,098	0,002		

* Mass per unit area: 77,3 kg/m² — calculation based on gypsum fibre board





A Flat roof

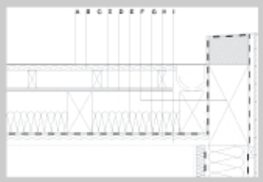
Fire protection performance	F	60
	REI	60
Classification based on fire exposure from underneath; static proof based on the remaining cross-section 60/190 mm		
Thermal performance	U [W/m²K]	0,21
	Diffusion adequate	adequate
	mw, B,A [kg/m²]	28,4
Acoustic performance	Rw (C;Ctr)	53 (-3;-8)
	Ln,w (Ci)	--
Sustainability*	GWPtot	-4,7

	Thickness	Building material	λ [W/mK]	μ [-] min - max	ρ [kg/m³]	c [J/kgK]	Reaction to fire DIN	EN
A		sheet metal roofing or plastic roofing membrane			7850		A	A1
B	24,0	spruce wood closed cladding without spacing of cladding boards	0,130	50	500	1,600	B2	D
C	60,0	spruce wood battens	0,130	50	500	1,600	B2	D
D		sarking membrane sd ≤ la; 0,3m			1000		B2	E
D	15,0	fibreboard (MDF)	0,120	11	600	1,700	B2	D
E	280,0	finger-jointed solid construction timber (BSH; ; e=800)	0,130	50	500	1,600	B2	D
F	200,0	cellulose fibre [0,040; R=55]	0,040	1 - 2	55	2,000	B2	B
G		vapour barrier sd~4m			1000			
H	24,0	spruce wood cladding with spacing of cladding boards(24/100): e=400	0,130	50	500	1,600	B2	D
I	25,0	gypsum plasterboards with improved properties at high temperatures (fire) (2x12,5 mm) or	0,250	10	900	1,050	B1	A2
I	25,0	gypsum fibre board (2x10 mm)	0,320	21	1000	1,100	A	A2

* Details of sustainability rating

PEI n.R.[MJ]	PEI e[MJ]	PEI t[MJ]	GWPtot [kg CO2/kg]	AP [kg SO2/kg]	EP [kg PO4/kg]	POCP [kg C2H4/kg]	ODP [kg R11/kg]
-53,9	0,103	466,7	991,4	0,025	0,009		

* Mass per unit area: 82,0 kg/m² — calculation based on gypsum plasterboard (DF)



ESSENZE FITODEPURAZIONE

ALBERI

PINUS TORREYANA

CALOCEDRUS DECURRENS

UMBELLULARIA CALIFORNICA

Scarsa necessità di acqua.

Sono richieste abbondanti innaffiate mensili nei mesi estivi più caldi.

Le dimensioni di questi alberi creano zone di ombra negli spazi esterni in modo da permettere la sosta anche nei mesi più

ARBUSTI

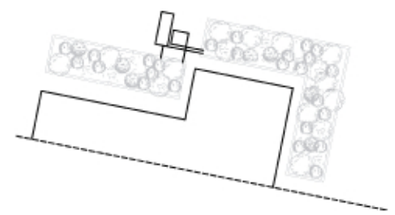
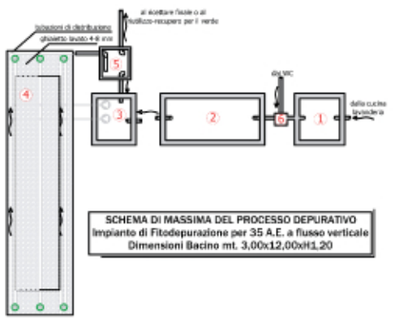
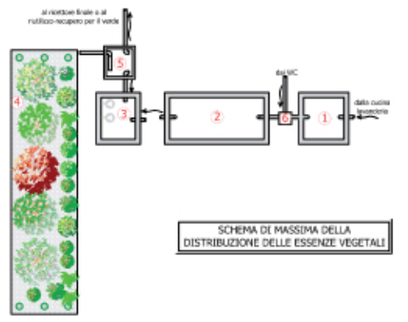
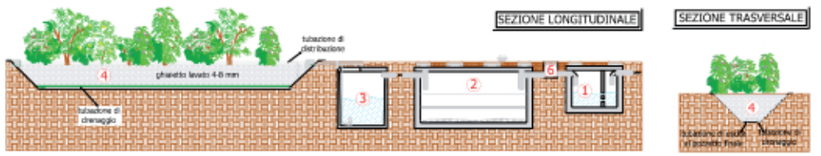
ARCTOSTAPHYLOS DENSIFLORA

ottima resitenza in condizioni di siccità, richiede una minima irrigazione nei mesi esitivi

CLAENOTUS DARK STAR

ottima tolleranza in climi secchi, una volta piantato non necessita di acqua.

PIANTA PERENNE

IRIS DOUGLASIANA

ottima resitenza in condizioni di siccità, richiede una minima irrigazione nei mesi esitivi