

Decaroc® - Mineral wool panels

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# Decaroc<sup>®</sup>

## Mineral wool panels

Up to 120 minutes fire-resistance !

Decaroc<sup>®</sup> Mineral wool panel is a sandwichpanel with a mineral wool core with a width of 1170 mm which can be erected vertical or horizontal.

The Decaroc<sup>®</sup> Mineral wool panel can be used as a separation wall or fire wall and as a ceiling in buildings as well as an exterior wall.

- **Fire resistance according EN 13501-2**

- Thickness 80 mm as wall, horizontal up to 4m span : EI 60
- Thickness 80 mm as wall, vertical up to 4m span : EI 60
- Thickness 100 mm as wall, horizontal up to 6m span : EI 90
- Thickness 100 mm as wall, vertical up to 6m span : EI 90
- Thickness 120 mm as wall, horizontal up to 6m span : EI 120
- Thickness 120 mm as wall, vertical up to 6m span : EI 120
- Thickness 120 mm as ceiling, up to 5m span : REI 120

- **Fire reaction according EN 13501-1**

- A2s1,d0 (the panel)
- A1 (mineral wool core)

R = load-bearing capacity

E = Integrity

I = Insulation

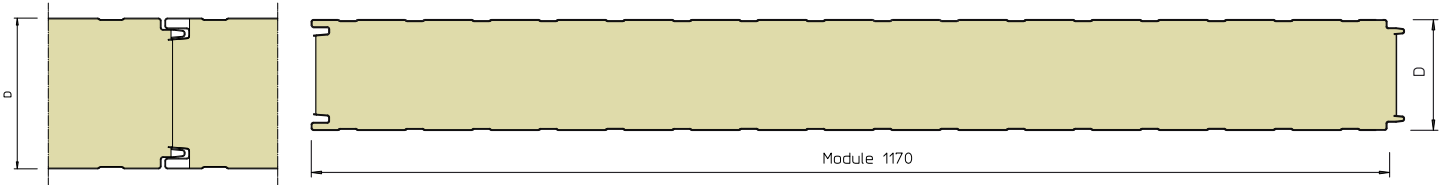
REI = load-bearing, integrity, insulation

EI = Integrity, Insulation



# Decaroc® - Mineral wool panels

## Characteristics



### Types

050C - 050F

### Dimensions

- **Module :**
  - Width : 1.170 mm
  - Total width : 1.186 mm
- **Length :**
  - Available on measure per 10 mm
  - Minimum length : 2.000 mm
  - Maximum length : 15.000 mm (dependent on thickness)
- **Types :**
  - 60 / 80 / 100 / 120 / 150 / 200 / 240 / 300 mm
- **Tolerances (from EN 14509)**
  - Width :  $\pm 2$  mm
  - Length :  $\pm 5$  mm (  $L \leq 3.000$  mm )  
 $\pm 10$  mm (  $L > 3.000$  mm )
  - Thickness :  $\pm 2$  mm (  $D \leq 100$  mm )  
 $\pm 2\%$  (  $D > 100$  mm )  
on real thickness

### Aspect

- Standard : Slightly ribbed
- Option : - Linea
  - Smooth (excl. stainless steel finishing)

### Weight Kg/m<sup>2</sup>

	60	80	100	120	150	200	240	300
050C	14,4	16,2	17,9	19,7	22,3	26,5	29,9	35,4
050F	16,3	18,6	21,0	23,4	26,9	32,6	37,2	44,6

### Insulation

- Decaroc® Rockwool consists of 95 to 99 % melted vulcanic rock drawn to fibre in order to receive a fibrous structure.
- The rockwool fibres are uniformaly split in order to keep the shearstrength constant.
- Characteristics :
  - Thermal insulation
  - Acoustic insulation
  - Incombustible material
- Lambda value : (EN 13162, EN14509, declared value)
  - Type : 050C : 42 mW/mK
  - 050F : 45 mW/mK

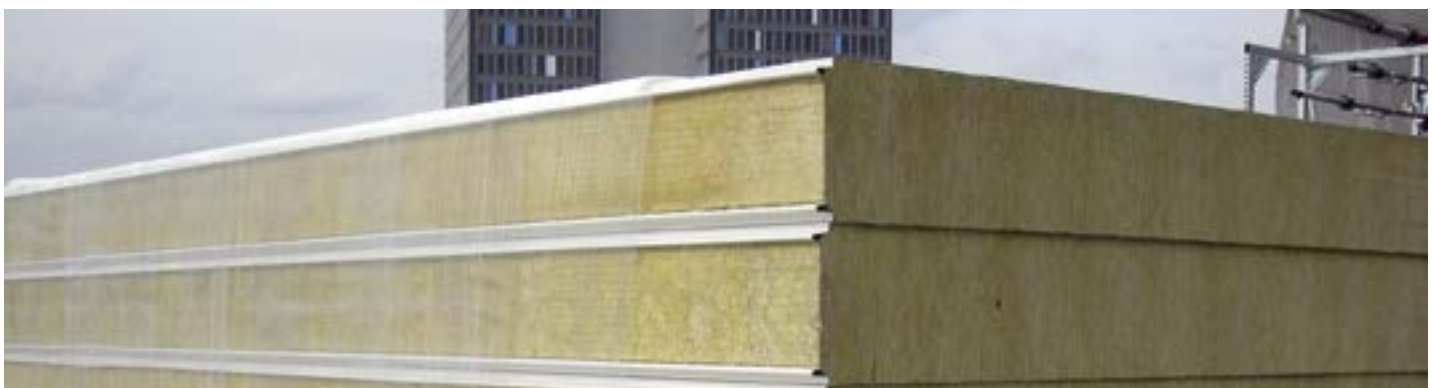
### U-Value (W/m<sup>2</sup>K)

	60	80	100	120	150	200	240	300
050C	0,656	0,498	0,400	0,334	0,289	0,205	0,172	0,146
050F	0,702	0,533	0,429	0,358	0,310	0,220	0,184	0,157

### Mechanical properties

Decaroc® Rockwool panels have a rockwool core specially produced and designed for sandwichpanels. That's why a subdivision in types is made according to the mechanical characteristics, fire resistance and not only according to the density of the rockwool.

Type : 050C  
050F (better fire-resistance)



# Decaroc® - Mineral wool panels

## Characteristics



### Fire characteristics

#### Fire reaction

- Decaroc® Mineral wool panels :  
fire class A2S1d0 according EN13501-1 and EN14509
- Rockwool core : fire class A1 according EN13501-1

#### Fire resistance - according EN 13501-2

- Thickness 80 mm as wall, horizontal up to 4m span : EI 60
- Thickness 80 mm as wall, vertical up to 4m span : EI 60
- Thickness 100 mm as wall, horizontal up to 6m span : EI 90
- Thickness 100 mm as wall, vertical up to 6m span : EI 90
- Thickness 120 mm as wall, horizontal up to 6m span : EI 120
- Thickness 120 mm as wall, vertical up to 6m span : EI 120
- Thickness 120 mm as ceiling, up to 5m span : REI 120



### Decaroc® - Acoustic

- The Decaroc® acoustic mineral wool panels are used for noise reduction in internal walls and ceilings for instance in machine-rooms, control rooms, car inspection rooms, etc.
- Note that the acoustic panel is only for use in dry, normal internal climate conditions, not for external use.
- The perforated steel sheet is only on one surface.



### Sound reduction

50F perforated

Decaroc 60 :  $R_w = 32$  dB ;  $\alpha_s = 0,85$

Decaroc 100 :  $R_w = 34$  dB ;  $\alpha_s = 0,90$

50F non perforated

Decaroc 60 :  $R_w = 29$  dB ;  $\alpha_s = 0,15$

Decaroc 100 :  $R_w = 30$  dB ;  $\alpha_s = 0,10$

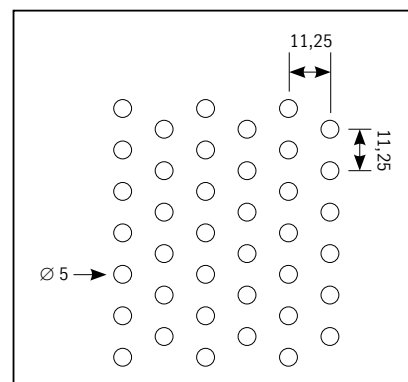
$R_w$  = Sound reduction index

$\alpha_s$  = Sound absorption coefficient

According to:

EN ISO 354:2003, EN ISO 140-3:1995

### Perforation



Ø 5 D-pitch 11,25  
perforation grade 17,5%



Perforation pattern

# Decaroc<sup>®</sup> - Mineral wool panels

## Finishing



### Standard finishing

- Lacquered galvanized steelplate with protection film.
- Thickness : 0,53 mm / 0,53 mm - coating included
- Colour : white 9002 (RAL) or 9010 (RAL)
- Lacquer : Polyestercoating 20 $\mu$ m + 5 $\mu$ m primer  
Food quality
- Application : for interior and exterior use  
(non-agressive environment)
- Other colours : see ISOCAB colour range

### Finishing in option

- **HDP 35 $\mu$ m - High Durable Polymer**
  - Thickness : 0,63 mm - coating included
  - Thickness : 0,78 mm - coating included
  - Food quality
- **PET film 55 $\mu$ m**  
Polyestercoating + Polyethylene-tereftalate film
  - Colour : white 9002 (RAL) and 9010 (RAL)
  - Thickness : 0,55 mm - coating included
  - Thickness : 0,65 mm - coating included
  - Food quality
  - Only for interior use
  - High chemical resistance durability
- **STAINLESS STEEL AISI 304 - 316 L**
  - Pinpoint finish
  - Line brushed finish
  - Aspect 2B
  - Food quality
- **Polyestercoating 15 $\mu$ m (interieur-coating)**
  - Colour : white 9002 (RAL)
  - Thickness : 0,52 mm coating included
  - Thickness : 0,77 mm coating included
  - Without protection film
- **Aluminium zinc**
  - Thickness : 0,50 mm
  - 185 gr/m<sup>2</sup> 2 sides
  - Without protection film



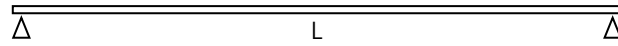
# Decaroc® 050F

## Span table wall

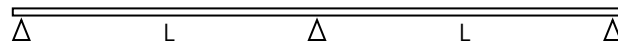


### DECAROC 050F - SPAN TABLE WALL

ADMISSIBLE DEVIDED LOAD IN FUNCTION OF THE SPAN  
Security factor S = min 3 – maximum bending = L/200



WIND PRESSURE - 2 SUPPORTS (daN/m <sup>2</sup> )					SPAN L in m	WIND SUCTION - 2 SUPPORTS (daN/m <sup>2</sup> )				
150	120	100	80	60		60	80	100	120	150
486	360	277	233	199	2,00	184	266	282	318	522
422	310	235	208	156	2,25	151	224	240	253	434
373	271	204	188	125	2,50	127	193	209	207	369
334	241	180	171	103	2,75	109	169	185	172	319
302	217	160	157	86	3,00	95	150	165	146	280
275	197	145	146	75	3,25	95	135	149	125	249
253	180	131	135	66	3,50	80	122	136	109	223
234	167	122	122	59	3,75	69	122	136	109	202
218	155	113	110	53	4,00	60	104	118	100	184
196	142	106	100	49	4,25	52	90	104	93	184
178	131	99	92	45	4,50	49	78	92	87	167
162	121	94	85	41	4,75	46	68	82	82	152
148	112	88	79	38	5,00	44	60	74	77	139
136	107	87	73		5,25		53	67	73	128
126	102	86	66		5,50		51	58	67	119
117	97	84	59		5,75		49	51	62	110
109	93	83	53		6,00		46	45	58	103
100	86	76	48		6,25		45	39	54	96
92	79	69	44		6,50		43	35	51	89
86	73	64			6,75			31	48	83
79	67	59			7,00			27	45	77
74	62				7,25				43	72
69	58				7,50				41	67
64	54				7,75				38	63
60	50				8,00				37	59



WIND PRESSURE - 3 SUPPORTS (daN/m <sup>2</sup> )					SPAN L in m	WIND SUCTION - 3 SUPPORTS (daN/m <sup>2</sup> )				
150	120	100	80	60		60	80	100	120	150
261	198	156	131	87	2,50	88	134	124	215	275
234	176	137	115	83	2,75	93	117	114	189	240
212	158	123	102	79	3,00	95	104	105	169	212
194	144	111	92	75	3,25	85	93	97	153	190
178	132	101	83	71	3,50	76	85	90	139	171
165	121	92	76	68	3,75	69	77	85	127	156
154	113	85	71	65	4,00	64	71	79	118	143
144	105	79	66	62	4,25	59	66	75	109	132
135	98	74	62	59	4,50	54	61	71	102	122
127	92	69	58	57	4,75	50	57	67	95	114
121	87	65	55	54	5,00	47	53	64	90	107
114	83	61	52	52	5,25	44	50	61	85	100
106	76	57	50	50	5,50	42	47	57	78	92
98	71	52	47		5,75		45	53	72	85
92	66	49	45		6,00		42	49	67	78
86	62	46	43		6,25		40	46	62	73
80	58	43	42		6,50		38	43	58	68
76	54	40			6,75			41	54	63
71					7,00					59



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