

**LF 90**

DOP 18

MW - EN 13162 - T4 - WS

**LF 110**

DOP 19

**RI  
SE**  
Research Institutes  
of Sweden**TERMOLAN**

ISOLAMENTOS TERMO-ACÚSTICOS, S.A.



Protection against fire



Thermal insulation



Acoustical insulation

**DEFINITION:**

Rigid slabs of uniform thickness made of stone wool fibres bonded with synthetic binder, without facing.

**APPLICATIONS:**

Slabs specially designed for floor applications as thermal and acoustical insulation and reduction of impact noise.

**BENEFITS:**

- Easy and quick application;
- Compatible with heating floors solutions;
- Very good thermal insulation;
- Excellent acoustical insulation and impact noise reduction;
- Very good mechanical performance;
- High insulation performances;
- Fire safety;
- Excellent water behaviour;
- Inert product respecting the environment (CFC and HCFC free).

**PRESENTATION:**

Slabs packed in packages. Options:

Product	THICKNESS (mm) [EN 823]	DIMENSIONS (mm) [EN 822]
LF 90	20 to 50	1200x600
LF 110	20 to 50	1200x1000

**Tolerances:**

THICKNESS (CLASS T4): -3 % OR -3 mm<sup>a)</sup> TO +5 % OR +5 mm<sup>b)</sup>

LENGTH: ±2%

WIDTH: ±1.5%

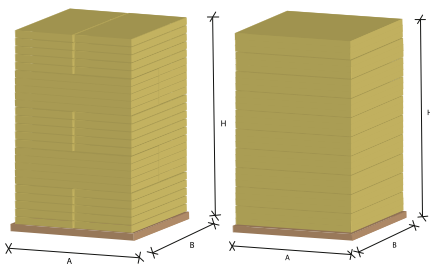
<sup>a)</sup> Is valid the greatest numerical tolerance

<sup>b)</sup> Is valid the lowest numerical tolerance

**PACKAGING:**

Packages packed in retractile plastic.

Geometry (AxBxH):

**PHYSICAL PROPERTIES OF MATERIALS**

## NOMINAL DENSITY

**LF 90****90 kg/m<sup>3</sup>****LF 110****110 kg/m<sup>3</sup>**THERMAL RESISTANCE,  $R_D$ EN 12667  
EN 12939

THICKNESS (mm)	20	30	40	50
$R_D$ (m <sup>2</sup> .K/W)	0.60	0.90	1.20	1.50

THERMAL CONDUCTIVITY,  $\lambda_D$ EN 12667  
EN 12939Declared value:  $\lambda_D = 0.033$  W/m.K

## FIRE REACTION

EN 13501-1  
ISO 1182Incombustible - **EUROCLASS A1**

## WATER ABSORPTION

NP EN 1609

**WS ≤ 1.00 kg/m<sup>2</sup>**

## WATER VAPOUR DIFFUSION FACTOR

EN 12086

 **$\mu = 1$** 

## DYNAMIC STIFFNESS

EN 29052  
ISO 9052  
ISO 7626**LF 90**  $SD \leq 8$  MN/m<sup>3</sup>**LF 110**  $SD \leq 12$  MN/m<sup>3</sup>

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# PHYSICAL PROPERTIES OF MATERIALS

ACOUSTICAL ABSORPTION COEFFICIENT,  $\alpha_s$

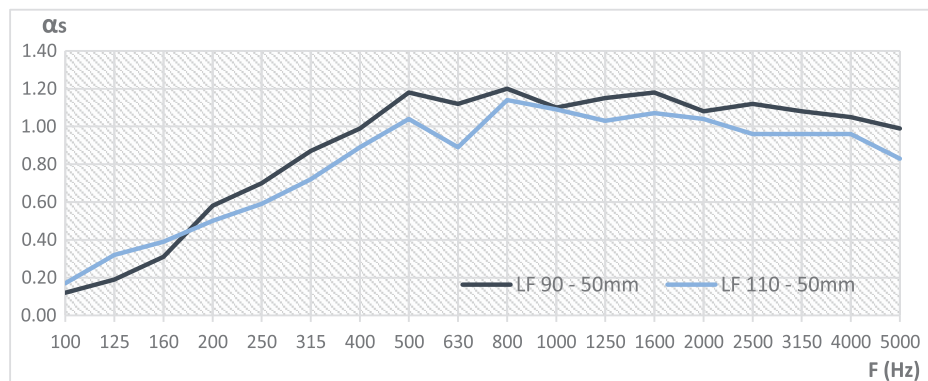
EN ISO 354

## LF 90

THICKNESS 50 mm	F (Hz)	100	125	160	200	250	315	400	500	630
	$\alpha_s$		0.12	0.19	0.31	0.58	0.70	0.87	0.99	1.18
THICKNESS 50 mm	F (Hz)	800	1000	1250	1600	2000	2500	3150	4000	5000
	$\alpha_s$		1.20	1.10	1.15	1.18	1.08	1.12	1.08	1.05

## LF 110

THICKNESS 50 mm	F (Hz)	100	125	160	200	250	315	400	500	630
	$\alpha_s$		0.17	0.32	0.39	0.50	0.59	0.72	0.89	1.04
THICKNESS 50 mm	F (Hz)	800	1000	1250	1600	2000	2500	3150	4000	5000
	$\alpha_s$		1.14	1.09	1.03	1.07	1.04	0.96	0.96	0.96



EQUIVALENT ABSORPTION COEFFICIENT,  $\alpha_w$

EN ISO 11654

**LF 90**  $\alpha_w = 1.00$  CLASS A

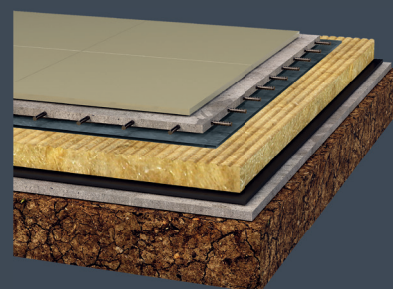
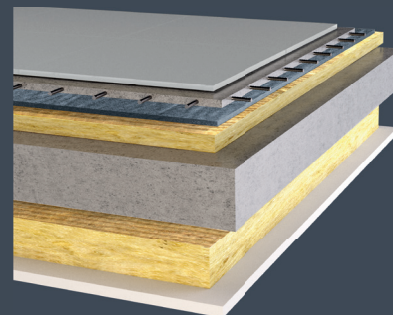
**LF 110**  $\alpha_w = 0.85$  (MH) CLASS B

## OTHER PROPERTIES

SQUARENESS [NP EN 824]	Deviation length / width < 5mm/m
FLATNESS [NP EN 825]	Deviation $\leq$ 6 mm
DIMENSIONAL STABILITY, $\Delta\epsilon$ [NP EN 1604]	23 °C / 90% HR: the relative deviation (length and width) do not exceed 0.0%

## ACOUSTICAL INSULATION: IMPACT NOISE TRANSMISSION

- To prevent the spread of these impact noises and the receipt by air should be done an elastic cut between the soil and the structural elements;
- The best solution is to make a floating floor on stone wool slabs;
- It is essential to be avoided the floating floor contact with the structural support elements.



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