

# Pi AA 70 PLENUTHERM

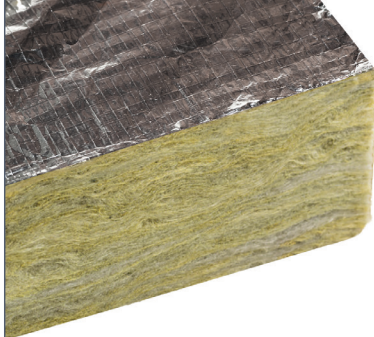
DOP 91  
MW - EN 14303

**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, with aluminium facing in both faces.

## APPLICATIONS:

Incombustible slabs, specially designed for thermal and/or acoustic insulation in vertical and horizontal interior partitions (between structure and the wall and / or on ceilings) with aluminum facing on both sides to provide a phonic barrier.

## BENEFITS:

- Easy and quick application;
- High insulation performances;
- Phonic barrier with high levels of acoustic performance;
- Very good mechanical performance;
- Fire safety;
- Chemically neutral and non corrosive;
- Excellent water behaviour;
- Inert product respecting the environment (CFC and HCFC free).

## PRESENTATION:

Slabs. Options:

THICKNESS (mm) [NP EN 823]	DIMENSIONS (mm) [NP EN 822]
50 to 100	1200x600

## Tolerances:

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

LENGTH: ±2%

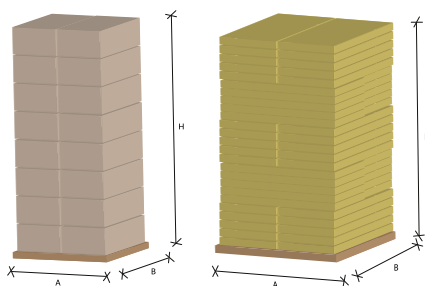
WIDTH: ±1.5%

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

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

## PACKAGING:

Cardboard boxes or packages packed in retractile plastic. Geometry (AxBxH):



## PHYSICAL PROPERTIES OF MATERIALS

### NOMINAL DENSITY

EN 1602  
ASTM C167

**70 kg/m<sup>3</sup>**

### MAXIMUM SERVICE TEMPERATURE

EN 14706  
ASTM C447

**ST(+) = 400 °C**

**NOTE:** The service temperature of the aluminum facing must not exceed 90 ° C.

### SPECIFIC HEAT FACTOR

**c = 0.84 kJ/kg.°C**

### THERMAL RESISTANCE, $R_D$

EN 12667  
EN 12939

THICKNESS (mm)	50	60	80	100
$R_D$ (m <sup>2</sup> .K/W)	1.50	1.80	2.40	3.00

### THERMAL CONDUCTIVITY, $\lambda$

EN 12667  
ASTM C335

MEAN TEMPERATURE(°C)	10	50	100	150	200	250	300	350	400
$\lambda$ (W/m.K)	0.033	0.039	0.046	0.055	0.066	0.078	0.093	0.109	0.128
$\lambda$ (kcal/h.m.K)	0.028	0.034	0.040	0.047	0.057	0.067	0.080	0.094	0.110

### FIRE REACTION

EN 13501-1  
ASTM E84

Incombustible - **EUROCLASS A1**



ER-03042021



GA-20210134

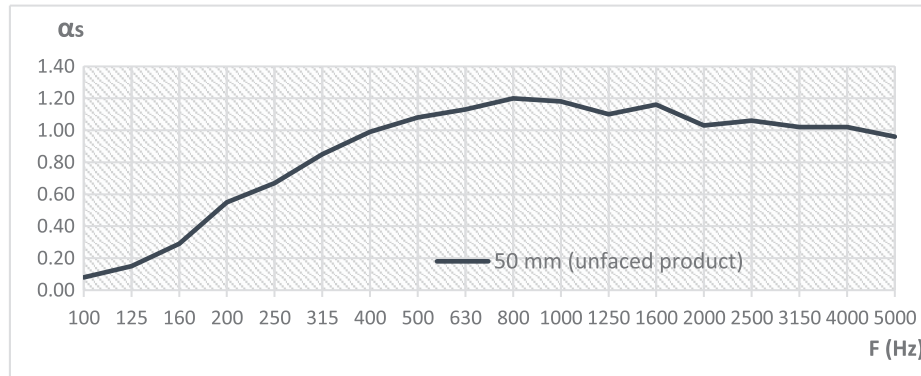


# PHYSICAL PROPERTIES OF MATERIALS

## ACOUSTICAL ABSORPTION COEFFICIENT, $\alpha_s$

EN ISO 354

THICKNESS 50 mm	F (Hz)	100	125	160	200	250	315	400	500	630
	$\alpha_s$		0.08	0.15	0.29	0.55	0.67	0.85	0.99	1.08
	F (Hz)	800	1000	1250	1600	2000	2500	3150	4000	5000
	$\alpha_s$		1.20	1.18	1.10	1.16	1.03	1.06	1.02	1.02



## EQUIVALENT ABSORPTION COEFFICIENT, $\alpha_w$

EN ISO 11654

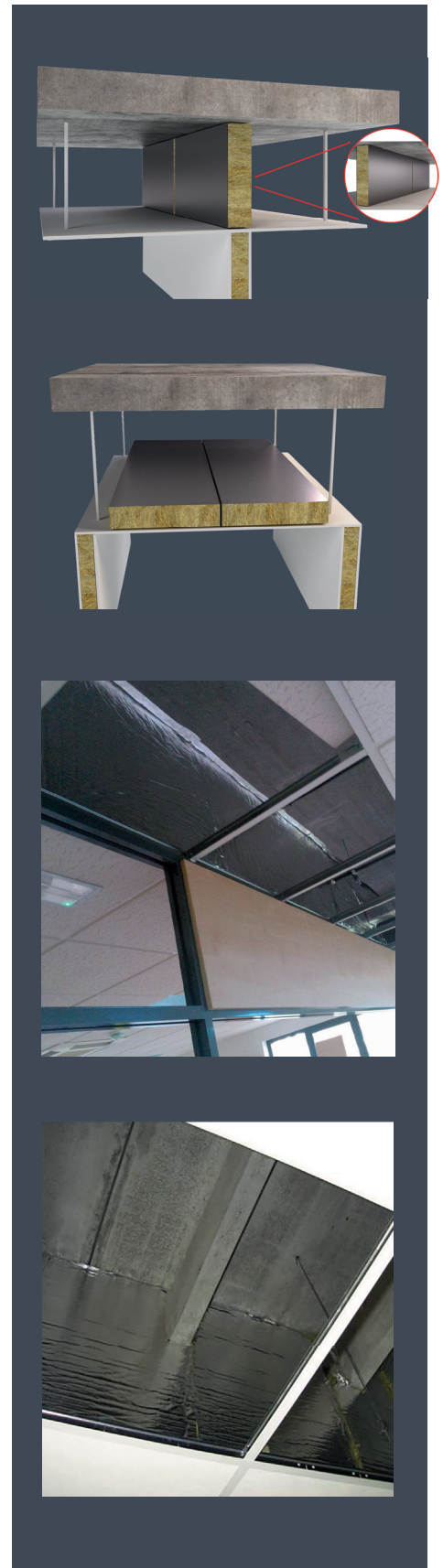
$\alpha_w = 1.00$  CLASS A

## 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) does not exceed 0.0%
WATER ABSORPTION [NP EN 1609]	WS $\leq$ 1.00 kg/m <sup>2</sup>
WATER VAPOUR PERMEABILITY [EN ISO 12572]	0.05 g/m <sup>2</sup> /24h (value depending of the aluminium facing)
WATER VAPOUR DIFFUSION FACTOR [EN 14303]	$\mu = 1.00$
AIR FLOW RESISTIVITY [EN 29053]	AF > 20 kPa.s/m <sup>2</sup> (referring to unfaced product)

## DETAILS OF APPLICATION

• PLENUThERM provides all the necessary acoustic, thermal and protection against fire comfort in commercial spaces, in offices, bars or other places, when installed between horizontal and vertical interior partitions.



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