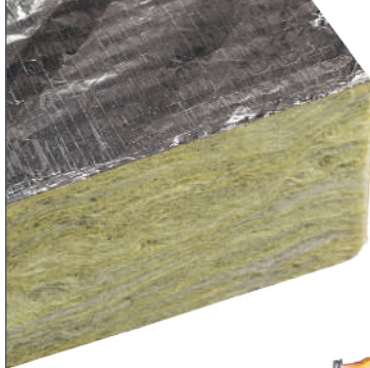


Pi AA 70  
**PLENUTHERM**  
DOP 91  
MW - EN 14303

**RI  
SE**  
Research Institutes  
of Sweden



**TERMOLAN**  
ISOLAMENTOS TERMO-ACÚSTICOS, S.A.



#### 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)<br>[NP EN 823] | DIMENSIONS (mm)<br>[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%

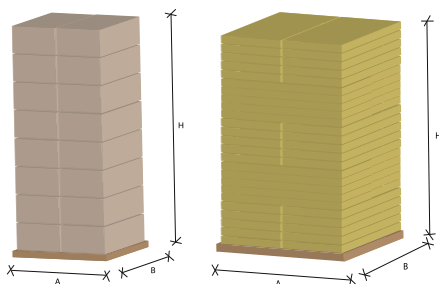
WIDTH: ±1.5%

<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<sub>D</sub>*

EN 12667  
EN 12939

| THICKNESS (mm)                             | 50   | 60   | 80   | 100  |
|--------------------------------------------|------|------|------|------|
| <i>R<sub>D</sub></i> (m <sup>2</sup> .K/W) | 1.50 | 1.80 | 2.40 | 3.00 |

### THERMAL CONDUCTIVITY, *λ*

EN 12667  
ASTM C335

| MEAN TEMPERATURE(°C)  | 10    | 50    | 100   | 150   | 200   | 250   | 300   | 350   | 400   |
|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <i>λ</i> (W/m.K)      | 0.033 | 0.039 | 0.046 | 0.055 | 0.066 | 0.078 | 0.093 | 0.109 | 0.128 |
| <i>λ</i> (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**



**TERMOLAN**

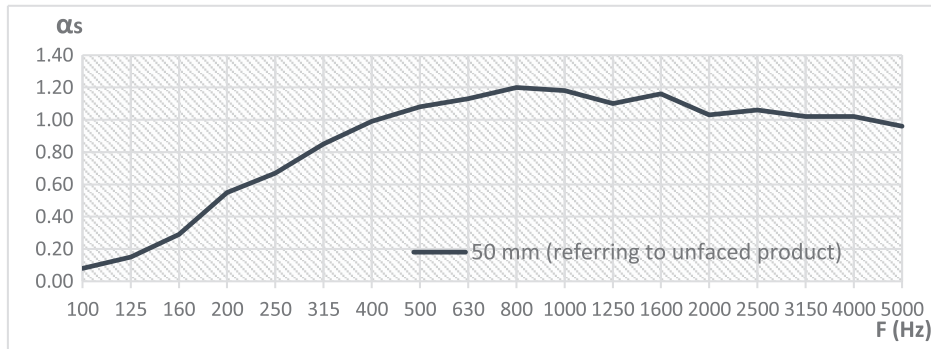
www.termolan.pt/en | www.rocterm.com | termolan@termolan.pt

# PHYSICAL PROPERTIES OF MATERIALS

## ACOUSTICAL ABSORPTION COEFFICIENT, $\alpha_s$

EN ISO 354

| THICKNESS<br>50 mm | F<br>(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 | 1.13 |
|                    | F<br>(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 | 0.96 |



## 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.

