

Pi 180 Pi 180 AL

DOP 49

DOP 50

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 and high density, made of stone wool fibres bonded with synthetic binder, without facing - Pi 180 - or aluminium faced - Pi 180 AL - (under prior consultation).

APPLICATIONS:

Thermal acoustical insulation in industrial applications. Particular suitable for applications where high compression strength is required or where the insulation may be subjected to mechanical loads or vibration (outer tank roof insulation and traffic areas).

BENEFITS:

- Easy and quick application;
- High insulation performances;
- Very good mechanical performance;
- Insulation subjected to mechanical loads and/or vibrations;
- Fire safety;
- Chemically neutral and non corrosive;
- Excellent water behaviour;
- Inert product respecting the environment (CFC and HCFC free).

PRESENTATION:

Slabs. Options of presentation:

THICKNESS (mm) [NP EN 823]	DIMENSIONS (mm) [NP EN 822]
30 to 100	1000×600

Tolerances:

THICKNESS (CLASS T5): -1 % OR -1 mm ^{a)} TO +3 mm

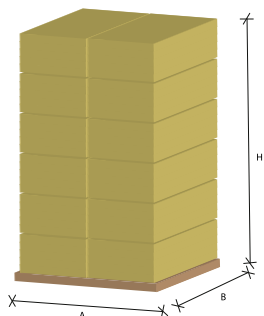
LENGTH: ±2 %

WIDTH: ±1.5 %

^{a)} Is valid the greatest numerical tolerance

PACKAGING:

Packages packed in retractile plastic.
Geometry (A×B×H):



PHYSICAL PROPERTIES OF MATERIALS

NOMINAL DENSITY

EN 1602
ASTM C167

180 kg/m³

MAXIMUM SERVICE TEMPERATURE

EN 14706
ASTM C447

ST(+) = 750 °C

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

SPECIFIC HEAT FACTOR

c = 0.84 kJ/kg.°C

THERMAL CONDUCTIVITY, λ

EN 12667
ASTM C335

MEAN TEMPERATURE (°C)	10	50	100	150	200	250	300	350	400
λ (W/m.K)	0.038	0.039	0.042	0.049	0.055	0.063	0.077	0.088	0.100
λ (kcal/h.m.K)	0.033	0.034	0.036	0.042	0.047	0.054	0.066	0.076	0.086

FIRE REACTION

EN 13501-1
ASTM E84

Incombustible - **EUROCLASS A1**

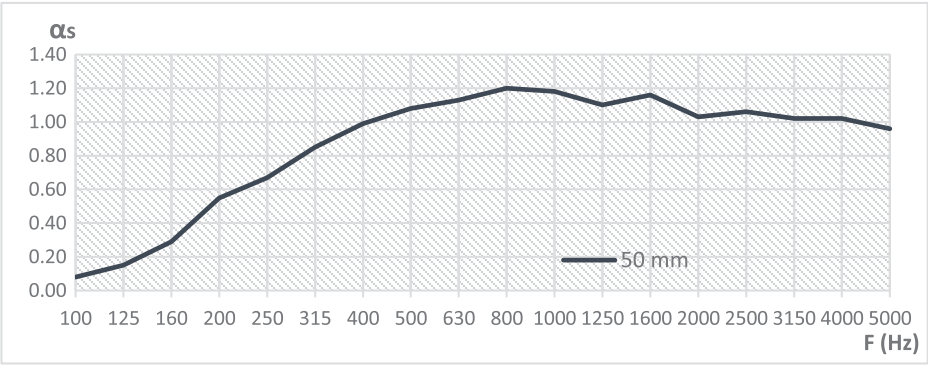


PHYSICAL PROPERTIES OF MATERIALS

ACOUSTICAL ABSORPTION COEFFICIENT, α_s

EN ISO 354

THICKNESS 50 mm	F (Hz)	100	125	160	200	250	315	400	500	630
	α_s	0.10	0.19	0.31	0.58	0.70	0.87	1.00	1.07	1.10
	F (Hz)	800	1000	1250	1600	2000	2500	3150	4000	5000
	α_s	1.15	1.10	1.08	1.16	1.08	1.05	1.01	0.96	0.93



EQUIVALENT ABSORPTION COEFFICIENT, α_w

EN ISO 11654

$\alpha_w = 0.75$ (MH) CLASS C

OTHER PROPERTIES

SQUARENESS [NP EN 824]	Deviation length / width < 5mm/m
FLATNESS [NP EN 825]	Deviation ≤ 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 ≤ 1.00 kg/m ²
WATER VAPOUR PERMEABILITY [EN ISO 12572]	0.05 g/m ² /24h (value depending of the aluminium facing)
WATER VAPOUR DIFFUSION FACTOR [EN 14303]	$\mu = 1.00$
AIR FLOW RESISTIVITY [EN 29053]	AF > 120 kPa.s/m ²
COMPRESSIVE STRENGTH, σ_{10} [NP EN 826]	≥ 75 kPa

