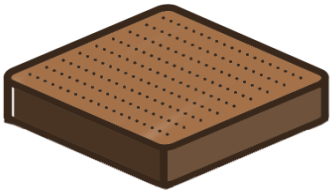


TermoPELO®
de tu cabeza a tu hogar

Termopelo is the only insulation system made with human hair. It can be used for roofs, walls and ventilated floors. It's a sustainable alternative for thermal insulation of houses and homes.

The hair fibers are intertwined by needle felting, a mechanical process that does not require the use of chemicals. The product is subjected to cleaning and treatment to remove impurities and is completely inert.

Reciclado
Comunidad peluqueros
MultiCIRCULAR
100% natural

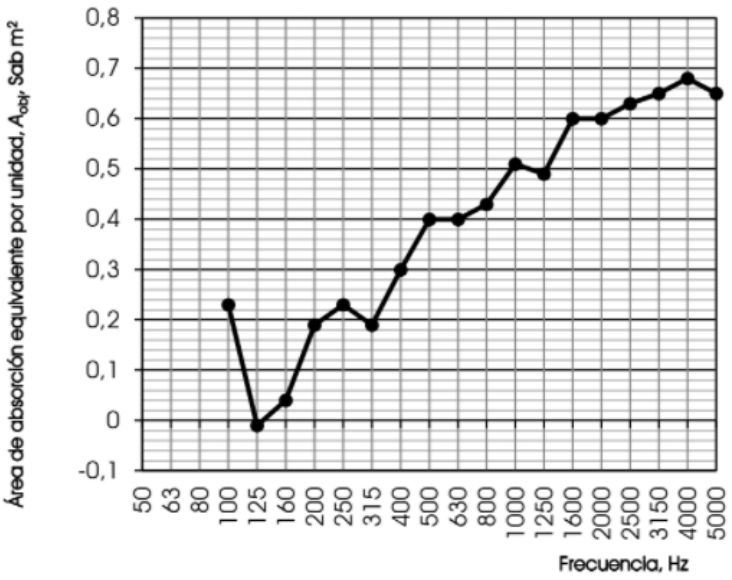
Technical sheet			
Specifics			
Thermal conductivity (^)(*)	0,040 W/mK		
Apparent average density	94,6 kg/m3		
Commercial formats	*TermoPELO 18*	*TermoPELO 39*	*TermoPELO 57*
Thickness (mm)	18,5	39	57,5
Thermal resistance (R100)	46	97,5	143,7
Transmittance (W/m2K)	0,21	0,010	0,0069
Dimensions per product			
Width (mm)	600		
Length (mm)	600		
Weight (g)	780	1560	2340

**Thermal conductivity test according to NCh850.Of2008. "Thermal Insulation – Determination of Steady State Thermal Resistance and Related Properties – Guard Hot Plate Apparatus".*
IDIEM REPORT No. 1,578,855 / 2021 PR.DTC.2020.1290 06/24/2021

Acoustic performance (material sound absorption)**

Weighted sound absorption coefficient: **αw=0.45**
Absorbent material classification: **D**
Noise Reduction Coefficient **NRC=0.43**
Average sound absorption **SAA=0.41**

Frecuencia Hz	Coeficiente de absorción sonora α
100	0,23
125	-0,01
160	0,04
200	0,19
250	0,23
315	0,19
400	0,30
500	0,40
630	0,40
800	0,43
1000	0,51
1250	0,49
1600	0,60
2000	0,60
2500	0,63
3150	0,65
4000	0,68
5000	0,65



Frec. [Hz]	100	125	160	200	250	315	400	500	630
Coeficiente de absorción sonora α	0,23	-0,01	0,04	0,19	0,23	0,19	0,30	0,40	0,40
Frec. [Hz]	800	1000	1250	1600	2000	2500	3150	4000	5000
Coeficiente de absorción sonora α	0,43	0,51	0,49	0,60	0,60	0,63	0,65	0,68	0,65

***Report N° 1.657.041/2021 CONSTRUCTION TECHNOLOGY DIVISION REF: PR.DTC.2020-1290 Sound absorption test in reverberant chamber. Idiem Acoustics Laboratory*
ISO 354:2003 Acoustics – "Measurement of sound absorption in a reverberation room"
ISO 11654:1997 Acoustics – "Sound absorbers for use in buildings – Rating of sound absorption"
ASTM C423 - 09a – "Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method"

Building Element Settings

Item	Description
Structure	Consisting of right feet, screeds and chains of pine wood (45 x 75 mm) brushed, separated by axis every 0.6 m
Face exposed to the fire	Standard caron plasterboard (ST) 10 mm thick fixed with screws of 6 x 1 1/2, spaced every 25 cm
Interior thermal insulation	Double layer of Termopelo with apparent density of 94.6 kg/m3, reaching a total nominal thickness of 38.9 mm
Face NOT exposed to the fire	9.5 mm thick osb plateand fixed with CRS screws thick thread every 0.15 m
Joints treatment	Treatment of joints with base putty and fiberglass tape at the meeting of plasterboard-cardboard

Total thickness	94,5 mm aprox

According to the comparison and analysis carried out, we observe that the proposed perimeter wall has a fire resistance performance equal to or greater than the references tested with classification F-15, for which the assimilation for said is feasible.

Failure criteria		**NCh935/1 Of.97**	**Test tube 1**	**Test tube 2**
Thermal insulation	Medium temp	9.2.2.1 a)	N/O	49 min
	Maximum temp	9.2.2.1 b)	30 min	48 min

“Taking into account the experience of the test carried out, the material used as insulation in the solution under study (Termopelo - Test tube N2) shows a behavior against fire that allows it to achieve a better thermal insulation time than an equal solution, but using as glass wool insulation (Test tube N1)”

**** "Fire resistance assimilation study of perimeter partition"*
Fire Resistance Assimilation Study of «F-15 Perimeter partition»
IPF-INF-152-21 / Decree No. 1565878