

# Declaration of Performance

Nº: TCRS-TW-01

Tecwool® F Mortar

**Mortar coating for contribution to fire resistance**

Parque Leganés Tecnológico  
C/Margarita Salas, 6  
28918 Leganés (Madrid)  
España

Sprayed mortar coating for contribution to fire resistance of mixed structural elements made of concrete and profiled sheet, for interior use.

The referred categories of use are:

Z<sub>1</sub>- Interior conditions excluding temperatures lower than 0 °C, in environments with high humidity content

Z<sub>2</sub>- Interior conditions excluding temperatures lower than 0 °C, with different humidity types to those indicated in Z<sub>1</sub>

The estimation of the system useful life is at least 25 years for the entire kit.

The indications given about the useful life of the product must not be interpreted as a guarantee given by the manufacturer, but as a means to choose the right product in relation to the works useful life.

System of assessment and verification of constancy of the performance:

## System 1

This declaration of performance has been written up for a construction product for which a European Technical Assessment has been issued

Institute of Construction Technology of Catalunya – ITeC

DITE 11/0185, issued the 9.06.2011, and used as ETE as required pursuant in Article 66.4

DITE 018 Guide part 1 and 3, used as DEE as required pursuant in Article 66.3

Institute of Construction Technology of Catalunya – NB 1220

The factory initial inspection and production control, the regular monitoring, the assessment and the continuous approval of the production control in the factory, are carried out by the System 1 (determination of the product-type by means of type testing conducted by the DITE).

Certification in accordance CE n° 1220-CPD-1110, 27.01.2012

Declared performance

Essential characteristics	Performance	Harmonised technical specification
Reaction to fire	A1	DITE 11/0185, the 9.09.2011, used as ETE as required pursuant in Article 66.4 (DITE based on the DITE 018 Guide part 1 and 3).
Fire resistance	See table 1 y 2	
Release of dangerous substances	It does not contain hazardous substances referenced in the Database of the European Commission 1	
Acoustic absorption	See table 3	
Thermal conductivity	See table 4	
Permeability to water vapour	$\mu= 2,1$	
Adhesion (resistance to traction)	See table 5	
Apparent density	226-304 kg/m <sup>3</sup>	
Dry extract (105°C)	98,90 %	
Description	Coarse surface	
Colour	Grey	
Apparent density	272-368 kg/m <sup>3</sup>	
Bending resistance (harden mortar)	0,15 MPa (28 days)	
Compression resistance (harden mortar)	0,18 MPa (28 days)	

The performance of the product identified in point 1 and 2 is in conformity with the declared performance in point 6

This declaration of performance is issued under the sole responsibility of the manufactured identified in point 2.

Signed for and on behalf of the manufactured by:



Victor Rodriguez.  
Technical Director.

Table 1. Temperature of the profiled steel sheet

Time to reach 350°C		
Description	TECWOOL® F thickness (mm)	Time to reach 350°C (minutes)
Trapezoidal profiled sheet of galvanized steel (HAIRCOL 59)	17,3	96
	26,8	129

Table 2. Equivalent concrete thickness

Steel profiled sheet	TECWOOL® F (mm) thickness	H <sub>eff</sub> (mm)	H <sub>e</sub> (mm)	H <sub>eq</sub> (mm)	Application time limit (min)
Trapezoidal profiled sheet of galvanized steel (HAIRCOL 59)	17,3	81,2	121	40	139
	26,8	91,2	136	45	152

Table 3: Acoustic absorption

Thickness (mm)	Weighted coefficient of acoustic absorption: $\alpha_w$	Type of acoustic absorption
17	0,60	C
26	0,80	B

Table 4: Thermal characteristics

$\lambda_{10, dry, 90/90}$	0,061	(W/m·K)	Fractile value of conductivity at 10°C under dry conditions, representing at least 90% of the production with a level of confidence of 90%
$\lambda_{D, 90/90(23/50)}$	0,075	(W/m·K)	Declared value of the conductivity design at 23°C and 50% R.H.
$\lambda_{D, 90/90(23/80)}$	0,080	(W/m·K)	Declared value of the conductivity design at a 23°C and 80% R.H.

Table 5: Resistance to traction over the profiled metallic steel of the mixed slab with normal concrete

Surface	TECWOOL® F thickness	Average resistance to traction	Break mode
Trapezoidal profiled sheet of galvanized steel (HAIRCOL 59)	16 mm	0,011 MPa	Cohesive break
	25 mm	0,011 MPa	Cohesive break