

NEOPLAK COMPOSITE PANEL

CHARACTERISTICS

NEOPLAK conveys the warmth and texture of wood as well as the coolness and hardness of metals with the advantages that are unique to Alucoil®, where the flatness of the product is particularly remarkable. The result is an extraordinary product of great performance for use in architecture, interior and exterior decoration which does not require any maintenance.

The use of NEOPLAK opens up a world of possibilities when planning construction solutions and optimising future resources. Façades with low levels of maintenance and an impeccable appearance, solid and unalterable building enclosures... the use of NEOPLAK ensures long-lasting, reliable results with high mechanical resistance as well as an unbeatable adaptation to the environment.

NEOPLAK is a type of flat panel that consist of two aluminium cover sheets and a FR core. Available solid, metallic colors as well as patterns that imitate other materials, such as wood, these decorative surfaces are obtained after a high performance weatherproof PVC FILM is applied to the panel.

Flatness, lightness and resistance to fire are the Three features that make the NEOPLAK panel adapts to the highest safety fire requirements of the Technical Building Code (B-s1, d0 clasification). The benefit of the mineral core responds to the requirements for safety in case of fire with reference to coating and wrapping of facades in its different assembly systems.

ADVANTAGES

Excellent formability, exceptional strength to weight ratio, extreme architectural flatness, and a cost-effective means of achieving design criteria not physically or economically possible with other building façade materials.

The corrosion resistant aluminum composite panels provide the fundamental design flexibility and long term performance demanded by almost any commercial application

This combination of benefits can enhance your most imaginative project, and help maintain its appearance long after completion.

The panels just need a cleaning with water and neutral soap to look like the first day. Do not use acidic or abrasive products that can abrade the acrylic protection layer by defacing the colour and may even lead the delamination of the PVC coat.

APPLICATIONS

The aluminium composite panel is especially recommended for new-construction ventilated façade sectors as well as renovation. It allows for ventilated, semi-ventilated or air-tight façades.

PRODUCT COMPOSITION

DIMENSIONALS SPECIFICATIONS OF THE PANEL	
Total thickness	4 mm
Aluminium thickness	0,4 mm
Weight	7,41 kg/m ²
Standard width	1.250 mm
Standard length	5.000 mm
Minimum / maximum length (under order)	2.000 / 7.000 mm
Core	Mineral FR
Thickness tolerance	+0,2 mm
Width tolerance	+2,5 mm
Length tolerance	+20 mm
Diagonal tolerance	± 2 mm/m
MECHANICAL REATURES OF THE PANEL	
Moment of inertia (J)	0,2603 (cm ⁴ /m) DIN 53293
Rigidity (EJ)	1.822 (KNcm ² /m) DIN 53293
Section modulus (W)	0,13015 (cm ³ /m) DIN 53293
Modulus of elasticity (E)	15.707 (N/mm ²) UNE EN ISO 527-1/2
Ultimate tensile strength (R _m)	43,26 (N/mm ²) UNE EN ISO 527-1/2
Yield strength (R _{p0.2})	30,69 (N/mm ²) UNE EN ISO 527-1/2
Elongation (A)	5,62 (%) UNE EN ISO 527-1/2
Audible reduction (R _w)	29,7 (dB) UNE EN ISO 717-1
Acoustic insulation (R _(A))	29,4 (dB) NBE-CA-88
Thermal resistance (R)	0,0113 (m ² K/W) UNE 92-202-89:1989
Thermal conductivity (λ)	0,410 (W/mK) UNE 92-202-89:1989
Stability referred to temperature	-50°C / +80°C
ALUMINIUM FEATURES	
Aluminium alloy	3005 UNE EN 573-3
Ultimate tensile strength (R _m)	170 (N/mm ²)
Yield strength (R _{p0.2})	151 (N/mm ²)
Elongation (A)	3,5 (%)
Modulus of elasticity (E)	70.000 (N/mm ²)
Thermal expansion (α)	2,3 (mm/m) Δ 100°
REACTION TO FIRE TEST	
Architectural	B s1 d0 UNE EN ISO 13501
SPECIFICATIONS FOR DECORATIVE SURFACES	
Internal face	Mill finish
External face	Decorative PVC fim 200 μ thickness available in different colours, and patterns such wood and metals look alike
PHYSICAL PROPERTIES OF THE OUTSIDE FACE	
Film Thickness ECCA T1	200 μ
Tensile stress at break DIN 53456	> 20 N/mm ²
Elongation at break DIN 53456	> 80%
Weather resistance DIN 53456	Maximum solar radiation is 8>GJ/m ² in the Xenotest 450 grade 4 of the grey scale (DIN EN 20105-A02) following requirements RAL-GZ 716/1 part 7
CORROSION AND CHEMICAL RESISTANCE	
Salt acid spray fog Resistance ECCA T8	EN 1396 CLASS 3 / C4 after 1.000 hours testing
Humidity Resistance ISO 6270	Without modification after 1.000 hours testing
QUV-B test ECCA T10 (After 500 hours light cycle testing)	Colour change of the surface E ≤ 1 Gloss decrease ≤ 10% Chalking ≤ 10%
ADDITIONAL INFORMATION	
Due to a acrylic film composition the temperature recommended for bending should be more than 10°C, stress whitening can occur when forming.	