

PoliLam Exterior Compact: EXPanels

Our exterior compact laminate, also known as phenolic panels, are double sided panels made up of multiple layers of compressed impregnated thermosetting resins of kraft paper compressed by high pressure and heat.

The buildup of our ExPanels include a UV resistant protective layer on both sides of the panel providing enhanced UV protection. Making them the ultimate material for building facades, including rainscreen systems.

Key Features

Dimensions:

4x8ft (1220x2440mm), 4x10ft (1220x3050mm)
5x10ft (1525x3050mm), 5x12ft (1525x3660mm)

Thickness:

4-25mm (1/8in-1in)

Physical Properties:

Based on EN 438, NEMA LD3-2005, EN ISO requirements, ensuring the material meets high strength and durability standards.

Fire Resistance:

Based on the requirements of EN 13501-1: 2018, 'Classification of Burning Behavior for Building Materials and Products,' this product is rated B1 for fire performance. The results indicate that smoke toxicity complies with safety level ZA3 or higher.

Formaldehyde Emission:

Based on EN 717-1: 2004 formaldehyde emission requirements, complying with the air quality standard for formaldehyde release.

Eco-Certification:

Certified by GREENGUARD, Greenguard Gold, FSC Forest Certification.

Technical Specifications

Property	Standard&Clause	Standard Value
Thickness Tolerance	EN438-2-5/ NEMA LD03-2005	4mm±0.4mm, 8mm±0.5mm, 10mm±0.5mm, 12.7mm±0.6mm, 25mm±1.2mm
Flatness Tolerance	EN438-2-9/ NEMA LD03-2005	6mm 5mm/m, 8mm 5mm/m, 10mm 3mm/m, 12.7mm 3mm/m
Length Width Tolerance	EN438-2-6	+10mm/-0
Straightness of Edge Tolerance	EN438-2-7	1.5mm/m max deviation
Flexural Modulus	EN ISO 178	9000 MPa (min)
Flexural Strength	EN ISO 178	100 MPa (min)
Density	EN ISO 1183	1.4g/cm ³
Dimensional Stability at Elevated Temperature	EN ISO 438-2-17	L 0.25% (max), L 0.35% (max)
Resistance to Artificial Weather	EN ISO 438-2-29	contrast min 3 after 650 MJ/m ² appearance min 4 after 650 MJ/m ²
Resistance to Climatic Shock	EN ISO 438-2-19	flexural strength index(Ds) 0.95 (min) flexural modulus index(Ds) 0.95 (min) appearance grade 4 (min)
Fire Test (SBI)	EN ISO 13501-1:2018	B-s1, d0(≥6mm)
Thermal Conductivity	EN ISO 12524	0.3 w/mk
Cleanability	ANSI NEMA LD 3-2005 Section 3.4	Score: 6
Stain Resistance	ANSI NEMA LD 3-2005 Section 3.4	No effect
Boiling Water Resistance	ANSI NEMA LD 3-2005 Section 3.5	No effect
High Temperature Resistance	ANSI NEMA LD 3-2005 Section 3.6 Hot wax method	No effect
Scratch Resistance	ANSI NEMA LD 3-2005 Section 3.7.3	Rating: 3
Ball Impact Resistance	ANSI NEMA LD 3-2005 Section 3.8	1100mm
Wear Resistance	ANSI NEMA LD 3-2005 Section 3.13	Solids: 1200 cycles Woods&patterns: 350cycles
Tensile Strength	ASTM D638-14	104MPa
Weathering Testing	DIN EN ISO 4892-2	0-10000h

Compact Laminate Decor Collection



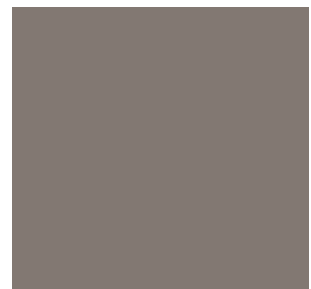
Digital Print



Woods



Patterns

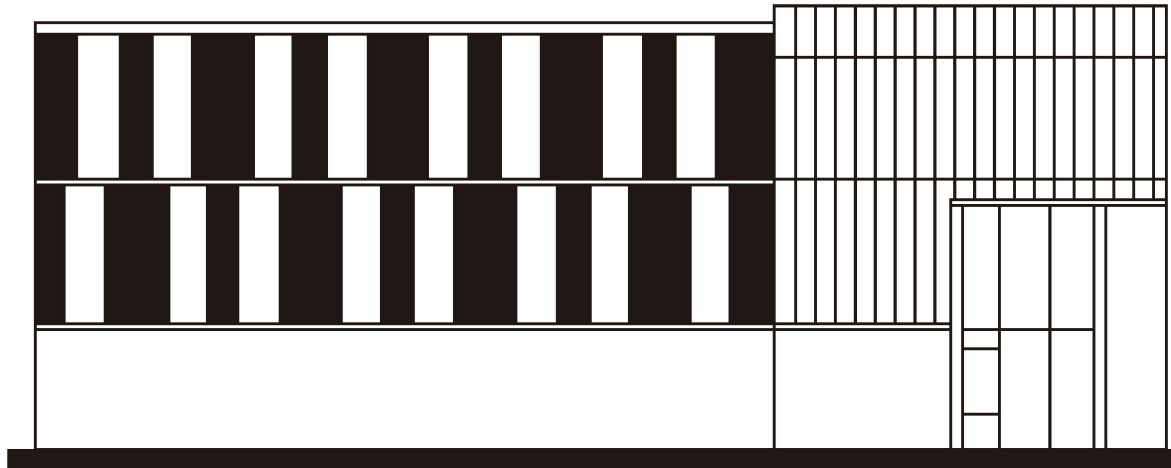


Solids

Featuring a range of Color Patterns and textures to suit any style. These designs add versatility and depth, ensuring a perfect match for various design projects.

Applications

PoliLam Exterior Compact are perfect for a variety of interior design applications including:



Installation and Maintenance

Installation Process

The system should be installed by a crew of skilled members who are familiar in using the proper techniques and appropriate tools and equipment.

Storage and handling until the time of installation is vital. The system profile should be as perfectly level and flat as possible. They should be stacked horizontally on flat, stable supports, with supporting panels and covers. Incorrect storage can lead to deformation or damaged boards.

The protective film should be left on until right before installation and removed evenly on both sides.

Rainscreen Installation

The PoliLam architectural panels act as a rain screen and keep the structural wall dry. This is because the air space that connects to the outside air evacuates both water and humidity that may have penetrated behind the panel through the joints. This water will in fact never reach the load-bearing walls or any of the thermal insulation.

The building envelope using rainscreen installation system in combination with our compact façade paneling, ExPanels create a durable exterior solution that limits the amount of water and moisture by creating an air cavity between the building's wall and the panel.

Airflow

Proper vertical airflow is important for the function, make sure that during installation there is no obstructions.

Scheme

The minimum distance between a drilled hole and the edge of the PoliLam panel should be 20 mm (or 75 mm concealed) and the maximum distance should be the panel thickness x10.

The minimum space between PoliLam panels should be no less than 10 mm.

The maximum distance between screws/rivets depends on the thickness of the panel:

PoliLam panels in 4.5mm thickness can for example be used in balcony panel applications.

The maximum distance between screws/rivets for 4.5mm thick panels is 300 mm.

A minimum of 6 mm thickness is recommended for facade cladding.