

PoliLam Fiber Reinforced Board (FRB)

Strong, lightweight, and fire-resistant, FRB is perfect for high-traffic wall applications in hospitals, commercial spaces, and public areas. It's also widely used in transport interiors, elevators, and laboratories, offering durability and safety where they matter most.

Key Features

Dimensions:

4x8ft (1220x2440mm), 4x10ft (1220x3050mm) ,
3mm (1/8in)

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 BS 476 Part 6&7, 'Fire tests on building materials and structures,' this product is rated Class 0 for fire performance. And ASTM E84-23d 'Standard Test Method for Surface Burning Characteristics of Building Materials' this product is rated Class A for fire performance.

Formaldehyde Emission:

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

Antibacterial Properties:

According to JIS Z2801-2010 standards, effective against Escherichia coli, Staphylococcus aureus, Salmonella enterica, Enterococcus faecalis, Klebsiella pneumoniae, and Pseudomonas aeruginosa. Antibacterial testing duration is no less than 24 hours with an antibacterial rate >99.9%, certified by SGS.

SVHC Substances of Very High Concern:

Screened according to EU REACH Regulation No. 1907/2006 for 224 SVHC substances, with results showing none detected. Test report available.

Asbestos-Free:

According to GB/T 23263-2009, analyzed by XRD and PLM with no detection of asbestos types such as tremolite, actinolite, anthophyllite, chrysotile, amosite, or crocidolite. Test report available.

Technical Specifications

Property	Standard&Clause	Standard Value
Thickness Tolerance	EN438-2-5/ NEMA LD03-2005	3mm±0.2mm
Flatness Tolerance	EN438-2-9/ NEMA LD03-2005	±3mm~±5mm
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	1.9g/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	ASTM E84-23d BS 476 Part 6&7	Class A Class 0
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	350 cycles
Tensile Strength	ASTM D638-14	104MPa

Fiber Reinforced Board (FRB) Decor Collection (Double Sided)



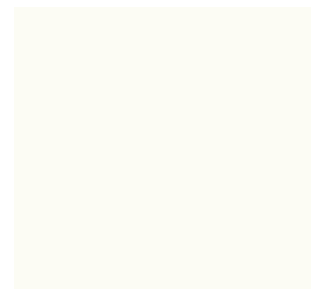
Digital Print



Woods



Patterns

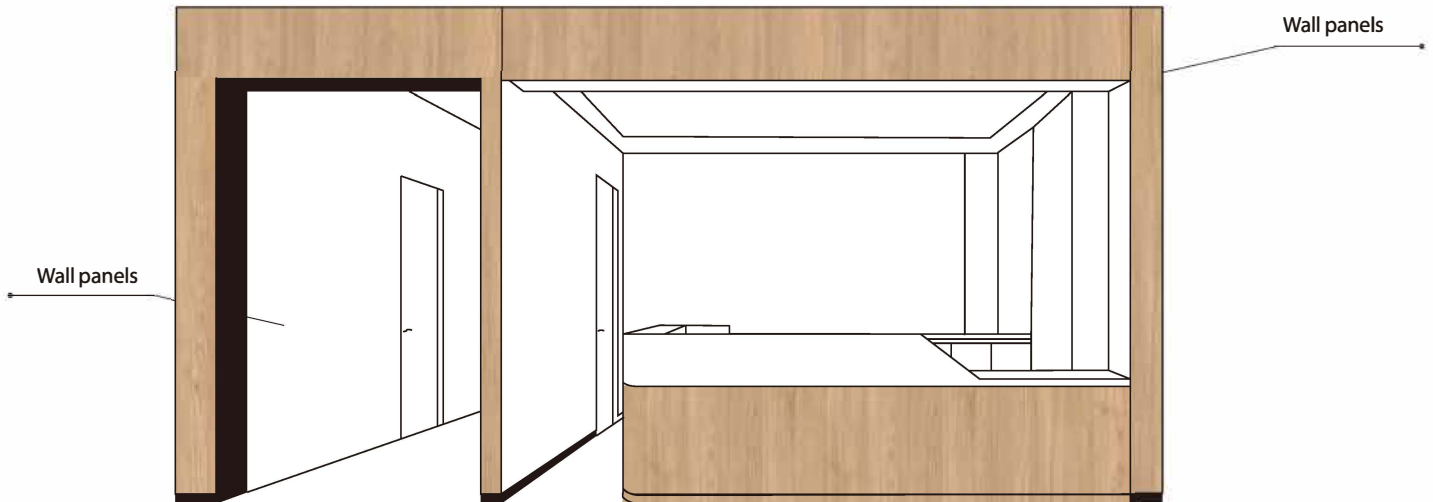


Solids

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

Applications

PoliLam Fiber Reinforced Board (FRB) are perfect for a variety of interior design applications including:



Mechanical and Environmental Performance

- **Bending Modulus of Elasticity:** The bending modulus of elasticity of 16,200 MPa provides reliable support for load-bearing use.
- **Abrasion Resistance:** The abrasion resistance of FRB is classified as the highest grade 3, ensuring the durability and lifespan of the material.
- **Stain Resistance:** The stain resistance is rated at the highest level, grade 1, which aids in daily cleaning and maintenance.

Installation and Maintenance

Installation:

For easier installation, PoliLam recommends allowing the FRB to acclimate for one week before cutting, especially in environments with changing humidity levels.

Maintenance:

FRB is easy to clean and maintain, with a surface that is corrosion-resistant, moisture-resistant, and

wear-resistant, making it an ideal choice for high-traffic residential and commercial spaces.

Handling and Storage:

FRB should be stored in a cool, dry indoor environment away from direct sunlight (recommended conditions: room temperature at 24°C with 45% relative humidity). Each panel should be clean, level, and neatly stacked on a pallet larger than the FRB panels, with a single stack height under 2.4 meters. Place protective cover boards on top and baseboards below the stack; avoid direct contact with the floor. It is advised to wrap the entire stack in plastic to prevent moisture. FRB must be stored horizontally and should not be placed upright.