Fiber Cement Boards/ Gypsum Drywall/ Panels

JPL Innovations. Pvt. Ltd.

Understanding Fibre Cement Boards

Fibre cement boards are factory-made building panels composed of cement, cellulose fibres, and mineral fillers. They are widely used for **interior and exterior wall cladding**, ceilings, and partitions due to their **high strength, dimensional stability, and resistance to moisture, fire, and termites**.

These boards provide a durable substrate but typically have **visible joints, screw marks, and surface porosity (air holes)** after installation. To achieve a smooth, paint-ready finish, they require **joint treatment, surface levelling, and a compatible coating system** that can accommodate minor movement while maintaining adhesion.

Understanding Gypsum (drywall) boards

Gypsum drywall boards are lightweight panels made from a **gypsum core encased in paper liners**, commonly used for **interior walls and ceilings**. They are preferred for their **ease of installation, smooth base surface, and cost efficiency** in modern construction.

However, drywall systems rely heavily on **joint finishing**, as board joints and fastener locations remain visible after installation. Traditional jointing compounds and putties can be **prone to cracking, shrinkage, or poor adhesion** if not properly applied or if the substrate moves. A flexible, uniform coating layer is essential to create a **continuous, paint-ready surface**.

The Problem or Challenge

Both fibre cement and gypsum boards are high-performance substrates—but the **final finish quality depends on how joints, seams, and surface inconsistencies are treated**. A single material that can **fill joints, level surfaces, and act as a base coat before paint** simplifies execution and improves long-term performance.

So Why use JPL Terrashield fine?

Introducing JPL Terrashield fine

JPL Terrashield fine is a **polymer-modified elastomeric coating** engineered to function as both a **joint treatment material and a continuous surface leveller** that can be used for fibre cement boards and gypsum drywall systems.

JPL Terrashield fine creates:

1. A **uniform, flexible coating layer** across the entire substrate
2. Helps accommodate **micro-movement at board joints**
3. Reduces the risk of hairline cracking, and delivers a **consistent, paint-ready surface** after two coats of application with a 45 GSM nylon mesh embedded between the two coats.

Its formulation ensures **strong adhesion to cementitious and gypsum substrates**, controlled flexibility, and low shrinkage during curing. Once applied in the recommended coats, the surface can be **directly finished with decorative paints**, eliminating multiple intermediate steps.

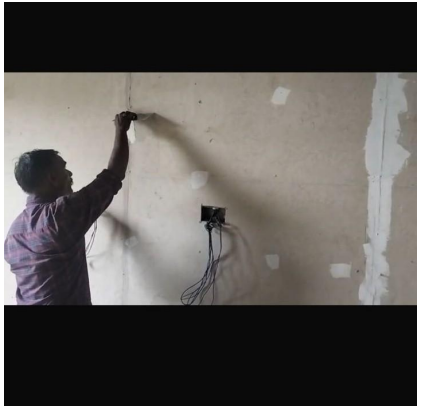
NABL Test Results

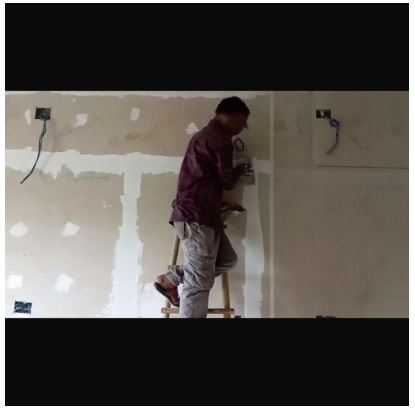
Carried out as per ASTM Standards by SriRam and Eurofin Labs

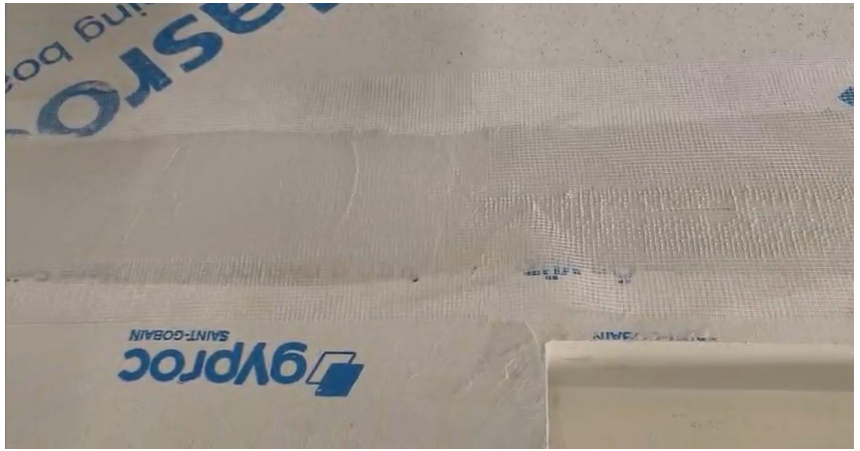
- Class 1 or A Fire Retardant Surface rating
- 3.2 MPA Compressive Strength
- 5.8 MPA Tensile Strength
- 1.9 MPA Flexural Strength
- 24.3% Absorption after submerged for 24hrs.
- 1.0 MPA Pull of Strength

Application Procedure for Joints and full-surface of Boards

1. Fix the boards/panels, leaving a 3-5 mm gap between them. Ensure there is support at each joint—both vertical and horizontal.
2. Fill the joints with JPL Terrashield fine Elastomeric Paintable Plaster and allow it to dry for six hours. As it sinks, apply another coat of JPL Terrashield fine.
3. Apply JPL Terrashield fine over a 2-inch area along the length of the joints .
4. Place fiber tape over the wet JPL Terrashield fine and remove excess material by pressing a hard blade over it. Let it dry completely.
5. Apply two thin coats of JPL Terrashield fine across the board to achieve a smooth, even, seamless surface.
6. Avoid sanding unless necessary. If sanding is done, reapply JPL Terrashield fine to that area.
7. Scrape the entire surface with a blade or 320-grit emery paper to remove any thin film. Primer is not needed.
8. Surface is now directly ready for paint after it is dry, apply any premium emulsion paints. No OBD.







Video Links for application of JPL Terrashield fine on Gypsum and Fibre Cement boards

Step 1 Surface coating

Step 2 Joint Filling

Step 3 Taping with Mesh

Problems with Conventional Putty and Jointing treatment

Conventional Putty vs Terrashield Fine

Parameter	Conventional Putty	Terrashield Fine
Primary purpose	Localised surface correction	Joint treatment + full-surface coating
Application area	Joints, screw heads, minor patches	Joints, fasteners **and entire board surface**
Flexibility	Rigid / brittle after curing	Elastomeric – accommodates micro-movement
Shrinkage	Prone to shrinkage at joints	Low shrinkage
Crack resistance	Hairline cracks common over time	Reduced risk of joint read-through
Adhesion	Moderate, surface-dependent	High adhesion to gypsum & fibre cement
Layer continuity	Discontinuous (patch-based)	Continuous, monolithic layer
Paint readiness	Requires primer + paint	Directly paintable after dry
Long-term finish	Joint visibility over time	Uniform finish, improved durability

Key Issues with Direct Painting

- **Visible joints and fasteners**
  Board joints, screw heads, and surface undulations remain visible, especially under side lighting.

- **Differential absorption**
  Fibre cement and gypsum boards have **uneven porosity**, causing patchy paint absorption and inconsistent sheen.

- **Crack formation at joints**
  Boards experience minor thermal and structural movement. Paint films alone cannot bridge joints, leading to **hairline cracking**.

- **Reduced paint durability**
  Paint applied directly on boards lacks a stabilised base layer, resulting in **early deterioration, peeling, or uneven ageing**.

- **Higher lifecycle cost**
  Initial savings are offset by **early repainting, touch-ups, and client dissatisfaction**.

FAQ

How do we fix bubbling?
Scrape the rough areas with a dry blade and apply another coat of JPL Terrashield fine in the effected areas.

How can we prevent bubbling in the future?
Allow each coat to dry and impregnate completely.

Why is no primer required?
JPL Terrashield fine is hydrophobic and won’t absorb paint.

How can we maintain product viscosity?
The product retains its viscosity for 6-8 weeks after manufacturing. If thickening occurs, add 500 ml to 1 liter of water to a 20 kg bag and mix well. The material consistency must be such that you are able to hold the material on a paintable plaster blade.

What is the product’s shelf life?
The shelf life is 18 months.

What is the pot life of the product?
Pot life is generally 3-4 hours.If the top layer dries, sprinkle water and mix to restore usability.

JPL Innovations

Still Have Questions?

We're here to help. Contact our technical team for live demonstrations, custom training, or product support.

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