

# Dry Walls

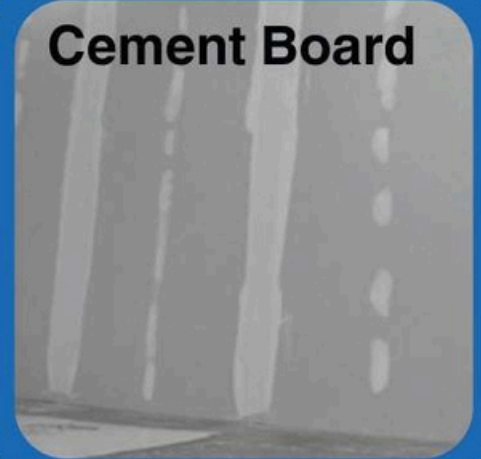
✓ Advantages    ✓ Challenges

✓ Solutions

**Gypsum Board**





**Cement Board**



**Cement/ AAC Panels**



## Cement Boards (Fibre Cement Boards)

 <b>Advantages</b>	 <b>Challenges &amp; Limitations</b>
1. Excellent Moisture & Water Resistance	1. Joint Cracking – The Biggest Concern
2. High Durability & Impact Resistance	2. Surface Homogeneity Issues
3. Fire Resistance	3. Limited Flexural Tolerance
4. Termite & Pest Proof	4. Incorrect Product Selection
5. Compatibility with Multiple Finishes	5. Skill Dependency
6. Speed of Construction	6. Cost Escalation Due to Rework



All these challenges can be addressed by  
using the following :



**ERP (Smooth)**  
**Elastomeric Paintable**  
**Plaster**



**Block Bond**  
**Polymerized Tile**  
**Adhesive+**



**NoSeep-1**  
**(For Smaller voids)**

+



**NoSeep-2**  
**(For bigger voids)**



**NoRust**  
**Rust Inhibitive Primer**

- For M.S. structure
- To be applied on the metal directly

## Application Procedure for ERP (Smooth) Elastomeric Repair Plaster on FCB/Panels/Gypsum

- Fix the Boards/Panels, leaving a 3–5mm gap between them. Ensure there is support at each joint—both vertical and horizontal.
- Fill the joints with **ERP (Smooth)** Elastomeric Paintable Putty and allow it to dry for six hours. As it sinks, apply another coat of Magic Xp.
- Apply **ERP (Smooth)** over a 2-inch area along the joints.
- Place fiber tape over the wet **ERP (Smooth)** and remove excess material by pressing a hard blade over it. Let it dry completely.
- Apply two thin coats of **ERP (Smooth)** across the board to achieve a smooth, even, seamless surface.
- Avoid sanding unless necessary. If sanding is done, reapply **ERP (Smooth)** to that area.
- Scrape the entire surface with a blade or 320-grit emery paper to remove any thin film. Primer is not needed.
- Paint with **FTR** only.
- Do not apply additional putty on **ERP (Smooth)**.
- Use only emulsions with high compatibility (costing over Rs. 250 per liter).

## Rate analysis on Cement boards/panels

CEMENT BOARD	Particulars	Material Cost	Coverage	Cost/sq.ft
	Jointing and Taping with <b>ERP (Smooth)</b> (20 Kg)	Rs. 2,500/	1000 sq.ft.	₹2.50/
	Two Coats as Putty with <b>ERP (Smooth)</b> (20 Kg)	Rs. 2,500/	200 sq.ft.	₹12.50/
	<b>Zen</b> (Premium Emulsion) (20 Ltr)	Rs. 4,500/	1500 sq.ft.	₹3.00/
	Labour			₹10.00/
	<b>Total</b>	<b>Rs. 9,500/</b>	<b>2700 sq.ft</b>	<b>₹28.00/</b>

CEMENT PANELS	Particulars	Material Cost	Coverage	Cost/sq.ft
	Jointing and Taping with <b>ERP (Smooth)</b> (20 Kg)	Rs. 2,500	400 sq.ft.	₹6.25/
	Two Coats as Putty with <b>ERP (Smooth)</b> (20 Kg)	Rs. 2,500	200 sq.ft.	₹12.50/
	<b>Zen</b> (Premium Emulsion) (20 Ltr)	Rs. 4,500	1500 sq.ft.	₹3.00/
	Labour			₹10.00/
	<b>Total</b>	<b>Rs. 9,500/</b>	<b>2100 sq.ft</b>	<b>₹31.75/t</b>

GYPSUM BOARD	Particulars	Material Cost	Coverage	Cost/sq.ft
	Jointing and Taping with <b>ERP (Smooth)</b> (20 Kg)	Rs. 2,500	1200 sq.ft.	₹2.08/
	Two Coats as Putty with <b>ERP (Smooth)</b> (20 Kg)	Rs. 2,500	450 sq.ft.	₹12.50/
	<b>Zen</b> (Premium Emulsion) (20 Ltr)	Rs. 4,500	1500 sq.ft.	₹5.56/
	Labour			₹10.00/
	<b>Total</b>	<b>Rs. 9,500/</b>	<b>3150 sq.ft</b>	<b>₹20.64/</b>

For external painting, use only <b>No Moss</b> Anti-Fungal Emulsion	8500	1200	₹7.08/
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**\*The above rates are exclusive of GST, cartage, scaffolding, etc**

## Application Procedure for Tiles

### **Tile Fixing on Cement Boards (Drywall Areas)**

- Mark a true vertical reference using a plumb line at the skirting level.
- Take the tile and apply **Block Bond** on the rear side, ensuring the projection does not exceed 1 mm outside the groove.
- Position the tile against the cement board drywall and fix it with uniform manual pressure to ensure proper seating.
- Immediately carry out pointing of the joints to lock the tile in position.
- Continue laying tiles one above the other, maintaining alignment with the plumb line.
- Initial setting occurs within 72 hours; full stabilization is achieved by 96 hours.
- Once set, the tile will not fall off, provided it is not disturbed during the curing period.

### **Tile Pasting in Bathrooms (Walls & Floors)**

- For bathroom applications, only **NoSeep-2** must be used.
- Use **NoSeep 2** for both wall and floor tile pasting without any substitution.
- This is mandatory to ensure waterproof adhesion, durability, and resistance to moisture ingress.
- If you are using spacers, ensure they are filled only with **NoSeep 2**
- Pigment can be added to **NoSeep 2** to achieve the desired colour.

## FREQUENTLY ASKED QUESTIONS (FAQs)

### **1. Are fibre cement boards waterproof?**

Fibre cement boards are moisture resistant but not waterproof. They can handle humidity and incidental wetting, but prolonged water exposure or water ingress through joints can cause stress and surface failures if not protected by a compatible finishing system.

### **2. Why do cracks appear even when cement boards are strong?**

Cracks occur due to cumulative movement from thermal cycling, steel framework deflection, moisture variation, and fastener stress. While individual boards are strong, multiple boards joined together create movement concentration at joints and interfaces.

### **3. Can white cement putty be used on cement boards?**

White cement putty is not recommended. It is hydration-based, rigid, and has low strain tolerance, making it unsuitable for movement-prone cement board systems and prone to fatigue cracking over time.

### **4. Is joint sealant alone enough to prevent cracking?**

No. Joint sealants manage movement locally but do not redistribute stress across the surface. Without a compatible surface system, cracks usually migrate from joints to adjacent board areas.

### **5. Do elastomeric paints prevent cracks on cement boards?**

Elastomeric paints can mask hairline cracks but cannot prevent cracking if the substrate is rigid or unstable. Paint films are too thin to compensate for movement within cement board and drywall systems.

### **6. Is mesh reinforcement necessary on cement board surfaces?**

Yes. Mesh reinforcement significantly improves tensile strength and crack resistance by distributing stress across the surface and converting multiple boards into a single composite unit.

**7. What is the most important rule when finishing cement boards?**

Avoid mixing rigid and flexible materials. All layers—from joint filling to surface coating to painting—must be chemically compatible and capable of accommodating movement.

**8. What is the correct solution for cracks in cement board and drywall systems?**

The solution must be system-based, where joint treatment, surface coating, reinforcement, and painting complement each other. End-to-end compatibility is essential to absorb and distribute movement across the entire surface.

**9. Why is a system-based solution more effective than individual products?**

Cracking is a system-level issue caused by cumulative movement. Individual products solve isolated problems, whereas a system ensures uniform elasticity, adhesion, and durability across joints and surfaces.

**10. What type of product satisfies these system requirements?**

Products with elastomeric properties, strong adhesion, excellent film formation, and non-hydration chemistry are suitable. Such materials form flexible membranes that move with the board system instead of resisting it.

**11. Are such elastomeric system solutions available in the market?**

Yes. Companies such as FTA Solutions Private Limited manufacture elastomeric products designed to work as complete systems for joint filling, surface coating, and crack control in cement board and drywall applications.

**12. What performance criteria define a reliable crack-control system?**

A reliable system should achieve a minimum tensile strength of 2 MPa or higher, demonstrate strong adhesion and film continuity, and withstand cyclic movement without fatigue-related cracking.

### **13. What is the expected service life of such a system?**

When correctly applied as a complete system, elastomeric crack-control solutions typically deliver a minimum service life of 5–7 years, maintaining surface integrity under normal building movement conditions.

#### **FINAL PRODUCT VALIDATION & FIELD TESTING METHOD**

Crack-control performance cannot be judged only by datasheets or claims. A simple field validation test can quickly determine whether a product is suitable for drywall and fibre cement board systems.

#### **Step 1: Application**

Apply the product on the front (smooth) side of a laminate sheet at normal site thickness. Allow it to dry and cure for 48 hours under ambient conditions.

#### **Step 2: Flexibility Test**

Flex the laminate sheet from both directions.

- The coating must not crack, craze, or split.
- Any cracking indicates insufficient elasticity or poor film formation.

#### **Step 3: Surface Integrity Test**

Rub your hands firmly over the surface.

- The coating should remain smooth, intact, and non-powdery.
- Powdering or peeling indicates weak cohesion.

#### **Step 4: Water & Scrub Resistance Test**

Pour water over the surface and scrub gently.

- The coating should not soften, wash away, blister, or delaminate.
- Failure indicates poor hydrophobicity or weak polymer bonding.

#### **How to Interpret the Results**

- **Passes all tests:**

The product meets the minimum requirements to be part of a crack-control system.

- **Fails any one test:**

The product is unsuitable for fibre cement board or drywall applications, regardless of how it is marketed.

# ERP/Block Bond

# TECHNICAL DATA SHEET

PARTICULARS	Value
TENSILE STRENGTH(MPA)	0.02
WATER ABSORPTION(%)	25
MINIMUM & MAXIMUM LOADING (IN MICRONS)	100 - 3000
FLEXURAL STRENGTH(MPA)	4.7
COMPRESSIVE STRENGTH(MPA)	2.1
VISCOSITY	17 secs (2:1 dilution with water)
WEIGHT/LTR	1.73kg/ltr
PH	7
SURFACE DRYING	30 mins
RECOATABILITY	After 4 hours
SOLID CONTENT	77%
POLYMERS	Less than 17%
PLASTICIZERS	Less than 4%

# NOSEEP

## TECHNICAL DATA SHEET

PARTICULARS	NS-1	NS-2
WEIGHT/LTR	20 KG/LTR	20 KG/LTR
LEVELLING	SELF LEVELLING	SELF LEVELLING
PH	7	7
VISCOCITY WITH WATER 2:1	17 SEC	17 SEC
SURFACE DRYING	30 MINS	30 MINS
RECOATABILITY	After 4 hours - Not later than 6 months	After 4 hours - Not later than 6 months
SOLID CONTENT	42%	80%
MIN.THICKNESS (MICRONS)	30	800-900
MAX.THICKNESS (MICRONS)	50-60	1000-2000
APPLICATION TOOL	Brush/Roller	Trowel/Blade
BEST BEFORE	18 Months	18 Months
Tensile strength(ASTM D 638)	Not required	12.47N/mm2
Elongation at break after 500 hrs of uv (ASTM D 638) & (ASTM G 154) Polymer content	Not required More than 40%	5.92% More than 40%

PARTICULARS	NS-1	NS-2
<small>Elongation at break after 500 hrs of uv (ASTM D 638) &amp; (ASTM G 154)</small>		
POLYMER CONTENT	More than 40%	More than 40%
COMPRESSIVE STRENGTH (28 DAYS) N/MM2 OR MPA	Not required	7.2 (IS-17545-2021-Table2)
FLEXURAL STRENGTH	Not required	1.9 (ASTM D 790-17)
ADHESION STRENGTH TEST	Not required	2.2 (ASTM D 790-17)
UV RESISTANT	Not required	500hrs
WATER ABSORPTION	Nil	Nil



# NO RUST

PARTICULARS	CLEAR	PIGMENTED
Viscosity at 30°C	100 sec	130 sec
Weight / Ltr	0.8 kg/Ltr	0.89 kg/Ltr
Dilution Material	Mineral Turpentine Oil	Mineral Turpentine Oil
Settling	Nil	Nil
Surface Drying	35 min	35 min
Recoatibility	After 12 hours	After 12 hours
Finish	Glossy and smooth	Semi-glossy
Best Before	18 Months	18 Months





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**FTR** ✓  
First Time Right

**MISSION STATEMENT:**

At FTR Solutions, performance is the responsibility of the material—not an excuse left to execution. Our mission is to engineer and supply products that perform reliably on site, independent of workmanship variability.