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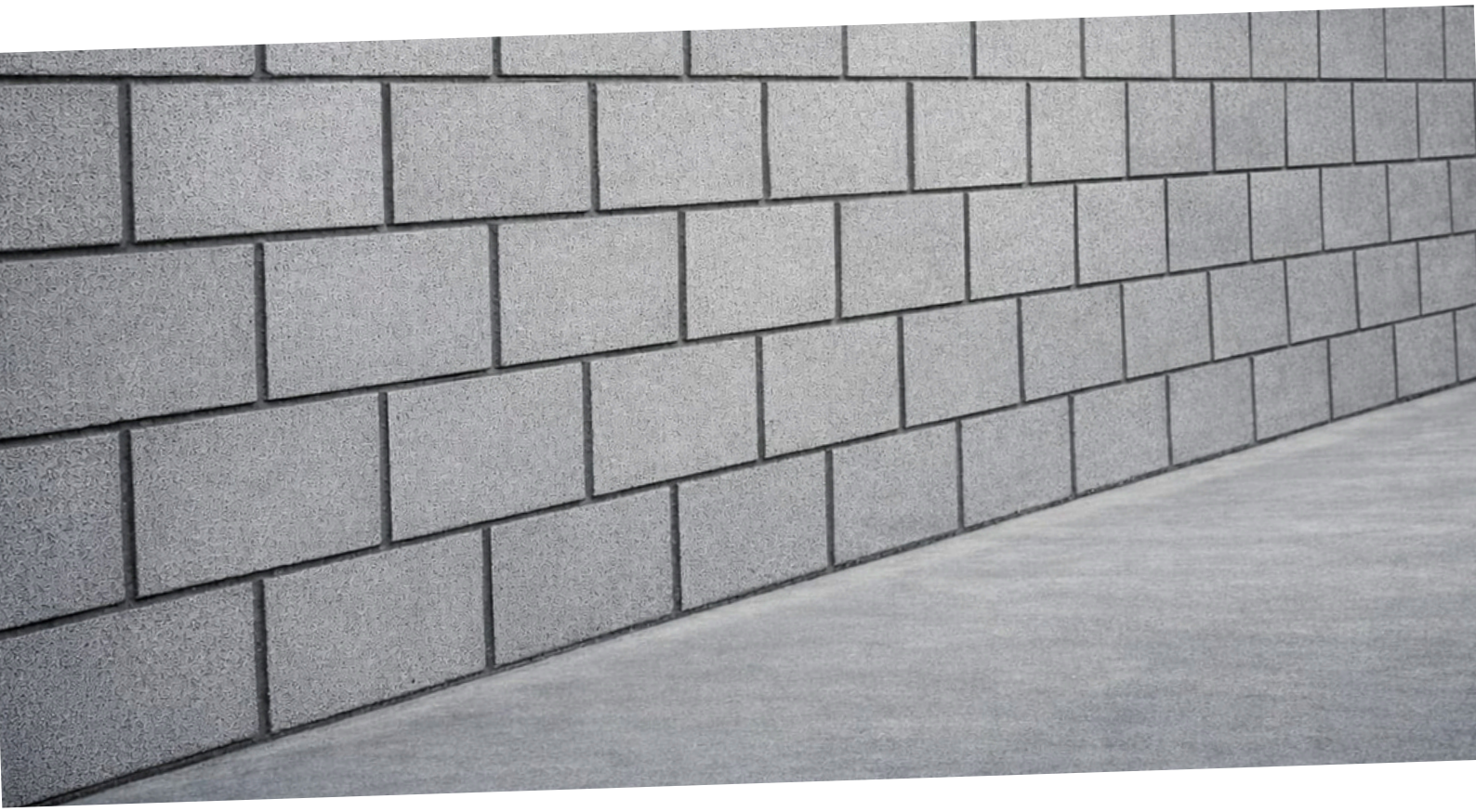
AAC BLOCKS

Lightweight | Strong | Sustainable

- **Advantages**
- **Challenges**
- **Solutions**



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ADVANTAGES &COMMON CHALLENGES WITH AAC BLOCK.

Advantages

1. Lightweight
2. Energy Efficient
3. Fire Resistant
4. Sound Insulation
5. Pest & Termite Resistant
6. Faster Construction
7. Eco-Friendly
8. Durable & Stable
9. Design Flexibility:

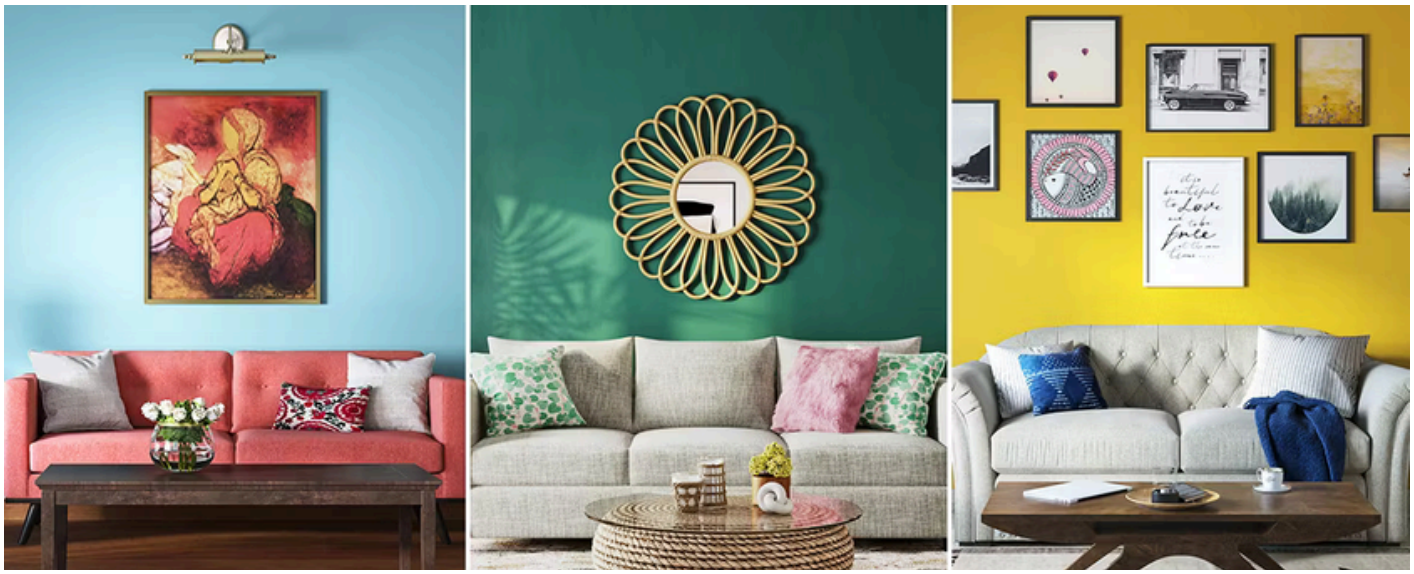
Common Challenges

1. Cracking
2. Moisture Absorption
3. Brittle Nature
4. High Initial Cost
5. Plaster Adhesion Issues
6. Specialized Installation
7. Low Tensile Strength
8. Poor Fixing Ability

Cost & Efficiency Savings

Reduced Mortar & Plaster

Lower Structural Costs



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SOLUTION SYSTEM COMPONENTS.

1.BLOCK BOND:

- Mechanical Adhesion
- Controlled Drying
- Uniform stress distribution across joints
- Does not need hydration
- Bond develop through adhesion and film formation
- Acts like a shock absorber to sustain any lateral movements.

Engineering Outcome:

- Strong inter-course bonding
- Better shear resistance
- Reduced crack propagation
- Monolithic wall behaviour

Conclusion: BLOCK-BOND enables AAC masonry to behave as a continuous structural assembly capable of transferring loads laterally through shear and compression paths, thereby preventing local deformation and collapse under suspended conditions

2.ERP *Fiber* (Polymerized Mortar)

- Applied over blocks as plaster
- Works as a base plaster
- Prevents block cracks
- Nano mesh is sandwiched between two coats of ERP Fiber

3.ERP *Smooth* (Elastomeric Paintable Putty)

- Final finishing coat applied over ERP Coarse
- Can be used as a punning material to level the surface
- Provides a smooth, seamless finish
- Ready for direct painting
- Available in colours
- Washable

APPLICATION PROCEDURE

Preventive Measure:

- Use **Block Bond** (Super Polymerized Bond) for pasting blocks.
- Check alignment with a 6 ft aluminum tube for both vertical and horizontal plumb.
- Fill larger voids with a mixture of block Bond and AAC pebbles.
- Affix electrical conduits using Block Bond.

Application of ERP(*Fiber*)

Please note that this procedure may be followed even if you have not used Block Bond for Block Pasting.

- Load **ERP** *Fiber* using a trowel or roller on the block surface.
- While the material is wet, affix a 45 GSM nylon mesh and swipe off the excess material evenly.
- Allow the surface to dry for 24 hours.
- Apply the second coat of ERP Coarse evenly.
- Apply **ERP** *Smooth* to a thickness of 2–3 mm.
- Level the surface with an aluminum tube to achieve a leveled finish.
- Allow it to dry for 8–10 hours.
- Apply the second coat of **ERP** *Smooth* to obtain a smooth finish.

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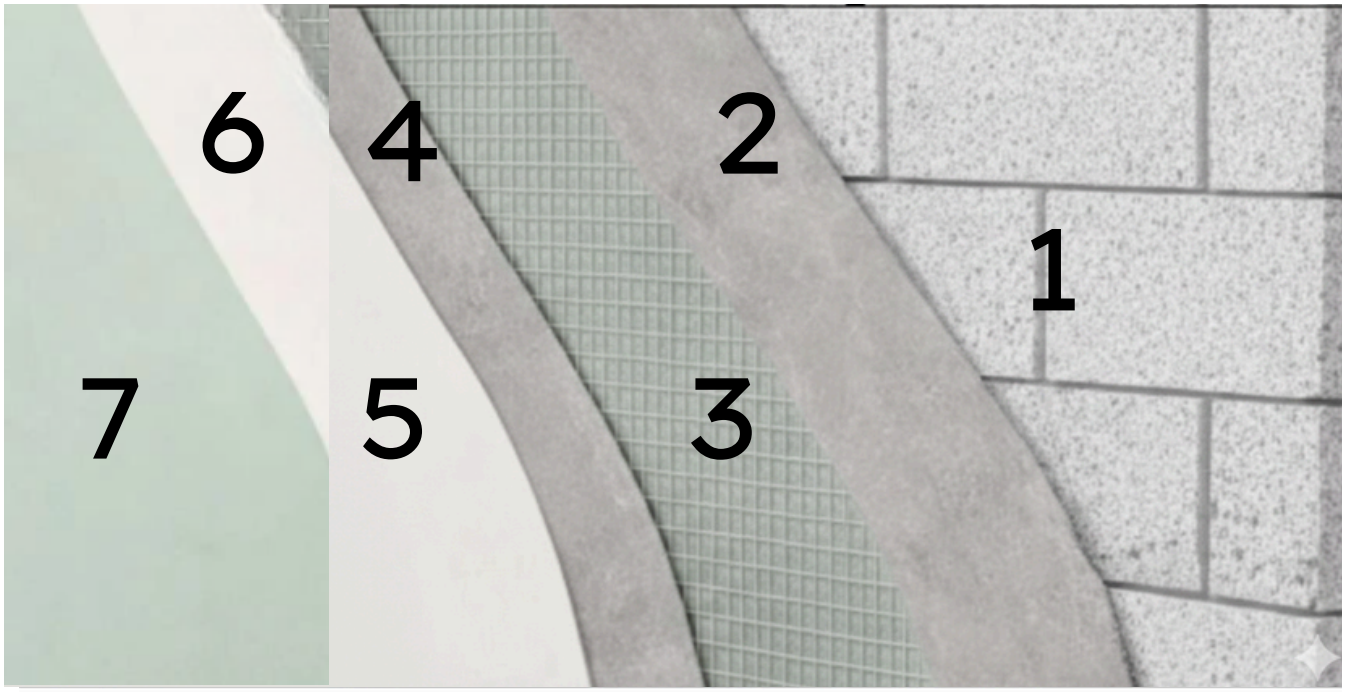
Checks & Balances for Using BLOCK-BOND

- Lay the bedding course first
- Allow the bedding to dry completely
- Install the first line of blocks across the entire perimeter
- Ensure all blocks are placed at right angles
- Ensure all corners are true right angles
- Ensure blocks are aligned in a straight horizontal line
- Raise the wall course by course
- Check vertical plumb simultaneously using an aluminium tube
- Mullions and beams must be prepared separately
- Ready mullions and beams must be pasted onto the blocks using **BLOCK-BOND**.

Checks And Balances For Preventive Measure

- Remove all bulged or loose material from the affected areas.
- Apply **ERP** Smooth evenly to achieve a smooth finish.
- Ensure all voids are properly filled before final finishing.
- Use only Premium Washable Emulsion for interior areas, applied over **ERP** Smooth**.**
- Use only antifungel emrestion for exterior applications.
- Do not apply any other powder or putty over **ERP** Smooth**.**
- For interiors, use only Premium Washable Emulsion.
- For exteriors, use only Anti-Fungal Emulsion.



Schematic Explanation For Preventive Measure

1. **Block Bond** is used for pasting the blocks and pointing.
2. Load **ERP** Fiberwith a blade or a trowel.
3. Affix 45 gsm nylon mesh when **ERP** Fiber is wet, and remove the excess material with a blade.
4. Apply a second coat of **ERP** Fiber evenly and level it using an aluminum tool. Allow it to dry for 10–12 hours.
5. Load **ERP** Smooth with a roller across the surface and Level it with an aluminum tube
6. Apply Second coat **ERP** Smooth with a roller and smoothen it using a spherical trowel.
7. Surface ready to be painted

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Nomenclature:

Providing and Application of **Block Bond**- Super Polymerized Bond for AAC block pasting to get an aligned surface in line with the size of AAC Blocks and pointing to be filled with Block bond to get an even surface.

Conventional		**FTR**	
Compound	Rs. 05.00	*Block Bond	Rs. 11.00
Single Beam	Rs. 10.00	**Beam	Rs. 10.00
Labour	Rs. 08.00	Labour	Rs. 05.00
Curing	Rs. 01.00	Curing	Not Required
TOTAL	**Rs. 24.00**	**TOTAL**	**Rs. 26.00**

*Apply it as thinly as possible
**Beam can be eliminated as per the span

The material is to be applied to a thickness of 1 mm on the surface. If applied thick Block Bond-Super Polymerized Bond may ooze out from the sites. Coverage' 60 sq.ft /20kg on 100mm blocks.

Providing and Application of two coats of **ERP-Fiber** Polymerized Mortar by sandwiching the 45 GSM nylon mesh to a maximum thickness of 3 mm to 3.5 mm. The second coat is to be levelled with an 6ft. aluminum tube vertically and horizontally.

Conventional		**FTR**	
POP Punning	Rs. 25.00	ERP-Fiber	Rs. 25.00
Mesh	Rs. 02.00	Mesh	Rs. 02.00
Labour	Rs. 10.00	Labour	Rs. 08.00
Total	**Rs. 37.00**	**Total**	**Rs. 35.00**

*Ensure that the blocks are properly aligned and all corners are in line. This will ensure that we get an absolutely even, crack-free surface with minimal surface defects.

Application of ERP-Fiber

Affixing Nylon-Mesh

Providing and Application of one coat of **ERP Smooth**- Elastomeric Paintable Putty over **ERP** Fiber to be applied with a roller evenly and excess material is to be removed with a blade without leaving any blade marks to get a seamless surface.The finished surface is to be coated with appropriate emulsions in the desired colour.

Conventional		**FTR**	
Primer	Rs. 02.00	Primer	Not required
Putty	Rs. 05.00	ERP-Smooth	Rs. 08.00
Sanding	Rs. 01.00	Sanding	Not required
Primer	Rs. 02.00	Primer	Not required
Prem. Emulsion	Rs. 06.00	Spade	Rs. 05.00
Labour	Rs. 10.00	Labour	Rs. 05.00
Total	**Rs. 26.00**	**Total**	**Rs. 18.00**

CORRECTIVE MEASURE.

- Remove all loose particles with an emery paper.
- Open up the cracks with a patra blade.
- Apply **ERP-**Smooth in the groves.
- Apply **ERP-**Smooth across the surface.
- Affix 45 GSM nylon mesh when the surface is wet.
- Swipe of the the excess material.
- Allow it to dry for at least six hours.
- Apply the second coat of **ERP-**Smooth and ensure that the mesh is hidden completely.

CHECKS AND BALANCES FOR CORRECTIVE MEASURE.

- Apply the mesh acrosh the surface inside-out
- Do not apply anyother puder baise meterial or putty on top **ERP** smooth**.**
- Apply **ERP** Smooth evenly to achieve a smooth finish.
- Do not use any primer befor pating
- Do not send the sarface, if sending is done out of completion apply one more coat of **ERP** Smooth
- Ensure all voids are properly filled before final finishing.
- Use only Premium Washable Emulsion for interior areas, applied over **ERP** Smooth.
- Use only antifungal coting for exterior applications.
- Do not apply any other powder or putty over **ERP** Smooth.
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Cost of Corrective Measure And New Gypsum Surface

Item	Rate(sq.ft.)
ERP Smooth	Rs.9.00
Mesh	Rs.2.00
Premium Emulsion	Rs.5.00
Labour	Rs.8.00
Total	**Rs.24.00**

1. The above rates are for plain surfaces.
2. For rough surfaces, the cost may go up depending on the basis of the depth of the texture.

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