

BABHANIYA OVERSEAS OPC PVT LTD

Premium Building & Construction Materials – Technical Product Profile

1. INFRASTRUCTURE & SUPPLY CHAIN ADVANTAGE

Babhaniya Overseas OPC Pvt Ltd is a premier manufacturer, customizer, and international exporter of high-strength, eco-friendly building and construction materials. Catering to global commercial projects, residential infrastructure, and high-rise developments, we provide standard and custom configurations engineered for severe structural loading and environmental compliance.

Based in the major industrial corridor of Bharuch, Gujarat, India, our logistics infrastructure seamlessly bridges raw material consolidation, automated precision manufacturing, and streamlined containerized transport via Western India's most advanced ocean transport terminals (Mundra and Hazira).

2. TECHNICAL DATA SHEETS (BUILDING MATERIALS)

A. Autoclaved Aerated Concrete (AAC) Fly Ash Blocks

Our eco-friendly, lightweight masonry solutions are engineered from high-grade fly ash, cement, lime, and aeration agents, offering exceptional thermal insulation, fire rating, and structural weight reduction.

TECHNICAL PROPERTY	STANDARD SPECIFICATIONS & VALUES
Oven-Dry Density Range	550 – 650 kg/m³ (Grade I / IS: 2185 Part 3)
Minimum Compressive Strength	3.5 to 5.0 N/mm² (MPa)
Thermal Conductivity (k-value)	0.122 – 0.142 W/mK (Up to 3x higher insulation than clay bricks)
Fire Resistance Rating	Up to 4 Hours (Depending on wall thickness)
Standard Available Sizes (mm)	Length: 600 mm Height: 200 mm Thickness: 75, 100, 150, 200, 230 mm
Primary Project Applications	High-Rise Residential Towers, Commercial Complex Masonry, Partition Walls.

B. High-Performance Block Joining Mortar

A semi-flexible, polymer-modified, cement-based adhesive compound specially formulated to provide high tensile bond strength, thin-joint construction accuracy (2-3 mm), and zero curing requirements for AAC block masonry.

PARAMETER SPECIFICATION	PERFORMANCE VALUE RANGE
Tensile Adhesion Strength @ 28 Days	Min 0.50 N/mm ²
Compressive Strength @ 28 Days	Min 10.0 to 12.0 N/mm ²
Water Demand / Mixing Ratio	25% - 30% water by weight of dry powder compound
Pot Life / Open Time	Approximately 60 to 90 minutes at ambient temperature
Primary Project Applications	Thin-bed masonry jointing for AAC blocks, concrete blocks, and fly ash bricks.

C. Glass Fiber Reinforced Polymer (GFRP) Rebars

A non-corrosive, non-conductive alternative to structural steel rebar. Composed of high-strength continuous glass fibers bound within an advanced vinyl ester resin matrix, designed for extreme marine and chemical exposure.

ENGINEERING PROPERTY	GFRP STRUCTURAL PERFORMANCE VALUE
Ultimate Tensile Strength	Min 600 to 1000+ MPa (Twice the tensile performance of structural steel)
Modulus of Elasticity	> 45 to 50 GPa
Corrosion & Chemical Resistance	100% Rust-proof, Acid, Alkali, and Saline Marine water resistant
Weight Density Ratio	1/4th the weight of traditional steel rebar (Drastically reduces transit costs)
Available Diameter Matrix	6 mm, 8 mm, 10 mm, 12 mm, 16 mm, 20 mm, 25 mm (Custom lengths)
Primary Project Applications	Marine Foundations, Sea-walls, Bridges, Tunnels, Water Treatment Plants, and Chemical Zones.

D. Engineered Aluminium Sections & TMT Steel Bars

Premium-grade structural metal profile systems customized to precise architectural and heavy industrial loading frameworks.

- **Aluminium Architectural Profiles:** Structural Alloys 6063-T6, 6061-T6. Available in Custom Anodized, Powder Coated, or Electrophoresis coatings for premium windows, curtain walls, structural glazing grids, and industrial louver systems.
- **High-Strength TMT Steel Rebars:** Fe 500D, Fe 550D, and Fe 600 grades conforming to international civil standards. Excellent elongation properties combined with high earthquake-resistant fatigue limits and superior weldability structural matrix.

3. EXPORT COMPLIANCE, QUALITY ASSURANCE & LOGISTICS

- **Rigorous Standard Compliance:** All manufacturing batches are rigorously inspected in-house for dimensional tolerance, crack resistance, and load-bearing capacities. Official export shipments can be audited via leading global third-party visual inspectors (SGS, Intertek, Bureau Veritas) as requested by destination country custom mandates.
- **Heavy-Duty Industrial Packaging:** * *AAC Blocks:* Palletized on reinforced wooden structures, securely edge-protected, and wrapped in heavy-duty UV-stabilized stretch films to prevent micro-fractures during maritime routing. * *Joining Mortar:* Packed in 40 Kg double-layered moisture-proof moisture-resistant laminated woven PP bags. * *GFRP & TMT Rebars:* Bound securely in high-tensile industrial bundles with weatherproof labels.
- **Container Payload Efficiency:** Maximized volume optimization utilizing heavy-tested 20-Foot and 40-Foot FCL container configurations customized to international structural weight limitations.

4. STRATEGIC ALLIANCES, COMMERCIAL SAMPLES & ORDERS

Babhaniya Overseas OPC Pvt Ltd engineers custom configurations mapped specifically to destination country structural building codes (such as Singapore Green Mark, BCA guidelines, British Standards, or ASTM compliance frameworks). We invite procurement executives, construction consultants, and commercial developers to request technical material samples and formal quotes.

Corporate Office Terminal:

Babhaniya Overseas OPC Pvt Ltd
Bharuch, Gujarat, India

Global Sourcing Terminals:

Founder & MD: Vicky Babhaniya
Official Corporate Terminal: <https://babhaniya.com>