

Your Concrete is Leaving Strength on the Table.

Fortis is a graphene solution for concrete — independently tested across M20, M30, and M40 grades, delivering 20–28% compressive strength improvement with no process change and no additional equipment.

- ✓ NABL-Certified Results
- ✓ 2 Indian Patents
- ✓ M20 / M30 / M40 Tested
- ✓ No Equipment Change
- ✓ Make in India



Compressive Strength — 28-Day NABL-Certified Results

Concrete Grade	Without Fortis	With Fortis	Improvement	Curing
M20 (RCC)	25.0 MPa	30.0 MPa	+20%	28 days
M30 (Structural)	32.1 MPa	40.7 MPa	+27%	28 days
M40 Microconcrete	40.25 MPa	51.3 MPa	+28%	28 days

Source: Global Lab & Gayatri Geotechnic Research LLP — NABL Accredited. Tests per IS 456:2000, IS 9013:1978.

Why It Matters On Site

36.9 MPa at 7 days
 Strip shuttering earlier.

M30 concrete reached 36.9 MPa at just 7 days — 23% above control. Earlier design strength means earlier formwork removal, reduced equipment rental, and faster project cycle.

Up to 40% lower permeability
 Fewer cracks. Longer life.

rGO bridges micro-cracks at the nanoscale and densifies the cement matrix — reducing water and chloride ingress that causes cracking and structural deterioration over time.

20–28% stronger at standard dosage
 More strength. Same process.

Fortis adds at 0.8% by weight of cement — a fractional addition with no equipment change, no modified batching, and no increase in cement content. Higher performance, not higher cost.

“For contractors, earlier shuttering removal and faster programme completion is often worth more than the material cost of Fortis itself.”

**Crack Bridging**

rGO platelets span micro-cracks in the cement matrix, resisting propagation under load and thermal stress.

**ITZ Strengthening**

Functional groups on rGO bond chemically with cement hydrates at the aggregate interface — the weakest point in conventional concrete.

**Nucleation Acceleration**

rGO acts as a nucleation site for C-S-H crystal growth — accelerating early hydration, producing a denser microstructure.

Field Proof & Specifications**C5X CORROSION ZONE****CASE STUDY — Gujarat Chemical Plant**

Environment: C5X Corrosion Zone — Salt & Fluorine Manufacturing Facility, Gujarat. 20-year-old industrial building with severe rebar corrosion, concrete spalling, and structural cracking. Conventional repair mortars were inadequate.

Fortis-enhanced M40 microconcrete delivered:

- 51.3 MPa compressive strength — 28% above control
- Denser surface finish — reported by on-site engineers
- Enhanced chloride and fluorine barrier in extreme corrosion environment
- High early strength enabled minimal operational downtime

Parameter	Detail
Form	Aqueous graphene solution
Base	rGO — grade NG-C1
Dosage	0.5–0.8% by weight of cement
Particle size	D90 < 5 µm
Compatibility	OPC, fly ash, GGBS, micro silica
Shelf life	12 months sealed
Patents	2 granted — Indian Patent Office
Accreditation	NABL — ISO/IEC 17025

Ready to Use Fortis for Your Project?

Trial quantities available. Technical datasheet on request.
Applications team support included.

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