

Alpha High-Rise

High-strength pumpable concrete for towers that touch the sky.

Grades	Slump	Lead Time	Temperature	Certifications
M40-M80	150-180mm	Standard 24hr	<30°C	BIS, IS 456:2000

Key Features

Pumpable to 200m+. PCE-based superplasticizer system maintains slump-flow during long pump runs. Aggregate gradation optimized to prevent line blockage. Tested on 60-floor pours.

Sustained workability 90+ min. Retarder admixture calibrated for Bangalore's hot weather. Slump retention chart published per mix. Maintains pumpability even with traffic delays.

High-strength range M40-M80. Project-specific designs for column requirements up to M80. Cube data exceeds design fck consistently. Verified through 7-day and 28-day testing.

Optimized aggregate gradation. 20mm + 10mm + crushed sand combination engineered for pumpability and strength. Gradation curves verified per IS 383. No segregation under pressure.

Project-specific mix design. Each high-rise project gets a custom mix design with trial cubes, slump retention curve, and pumping trial data. Approved by your structural consultant before supply.

Premium admixture system. Fosroc, BASF, or Sika polycarboxylate ether superplasticizer + retarder + GGBS/fly ash blend. Material test certificates for every batch.

Technical Specifications

Parameter	Value
Compressive Strength (28-day)	40 – 80 N/mm ² (per grade)
Cement Type	OPC 53 grade (Ultratech / Ramco / ACC)
Cement Content	380 – 450 kg/m ³
Mineral Admixture	GGBS 25-40% or Fly Ash 20-30%
W/C Ratio	0.30 – 0.42 (per grade)
Coarse Aggregate	20mm + 10mm crushed granite, IS 383 compliant
Fine Aggregate	Manufactured sand (M-sand), zone II
Chemical Admixture	PCE superplasticizer (Fosroc Auramix / BASF Glenium / Sika ViscoCrete)
Slump at Point of Placement	150 – 180 mm
Slump Retention	90 minutes minimum
Density	2380 – 2420 kg/m ³
Setting Time (initial)	4 – 6 hours (extended for hot weather)
Air Content	1.5 – 2.5%
Pumping Height Demonstrated	Up to 200m vertical
Pipe Diameter Recommended	125mm minimum
Code Reference	IS 456:2000, IS 10262:2019, IS 9103, IS 383

Applications

High-Rise Residential. 30+ floor towers, premium apartment complexes, mixed-use developments. Columns, shear walls, structural slabs.

Commercial Towers & IT Parks. Office towers, IT campuses, integrated commercial developments. Tall column lifts, transfer slabs, post-tensioned slabs.

Hospitals & Institutional. Multi-story healthcare facilities, educational institutions, hospitality. Where structural integrity over decades is non-negotiable.

Industrial Multi-Storey. Large warehouse + office combinations, manufacturing campuses with tall columns, parking structures.

Available Grades

M40 — Standard high-rise structural, residential towers up to 25 floors.

M45 — Premium residential and commercial mid-rise structures.

M50 — Tall buildings 25-40 floors, transfer slabs, columns under heavy load.

M55 — Premium high-rise above 40 floors, congested reinforcement zones.

M60 — Super-tall structures, prestressed elements, demanding compression members.

M65 — Specialty applications, ultra-tall buildings (project-specific).

M70 — Specialty applications, world-class high-rise (trial mandatory).

M75 / M80 — Custom design, trial mix mandatory, 14-day lead time.

Disclaimer: The specifications shown represent typical ranges. Actual mix designs are project-specific and subject to verification by Alpha Concrete's QC team. Quoted specifications must be confirmed against actual lab results before commercial commitment.