

Case Study



PROJECT INFORMATION

Project name: Enigma (ultra luxury) and Centrum Park (luxurious apartments & villas)

Client: Indiabulls Real Estate

Consultant: Arcop Associates Private Limited

Contractors: Indiabulls Construction limited

Location: Dwarka Expressway, Gurgaon

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PROJECT REQUIREMENT

Task at Hand

The project at Indiabulls demanded tough performance criterion, in high temperatures of Delhi summer. Indiabulls requested a mix design with stone dust, asking for a single solution for different Grades of concrete from M25 to M40, in SNF based admixture for one project and PCE based admixture for another project. The project would require the concrete to have a pump-able workability after retention of 120 minutes at 35°C. A proper design and high performance solution was requested at the available condition.

- Cement - Wonder OPC 53 grade
- 20 mm, 10 mm Coarse Aggregates and Stone dust from Kotputli
- Fly Ash - NTPC Badarpur
- Temperature range 35°C - 45°C
- Supply of admixtures (PCE based, SNF based) with given source of raw material for different grades

Mix Design	M25	M30	M40
Cement	240 kg	278 kg	352 kg
Fly Ash	80 kg	92 kg	88 kg
10 mm	540 kg	541 kg	5363 kg
20 mm	540 kg	541 kg	533 kg
Stone dust	884 kg	795 kg	772 kg
Water	160 kg	167 kg	167 kg
w/c ratio	0.50 kg	0.45 kg	0.38 kg

Area Covered

Approximately 190,000 m² of total concrete required for both the projects.

DCP SOLUTION

The technical team at Don Construction Products (DCP) suggested high performance admixtures under name Hyperplast and Supaflo to the client with concrete workability and strength meeting the requirements. A study of materials and their properties with mock-up trials were conducted on-site and planned to arrive at optimum solution. **Hyperplast PC711** was recommended to be used at 0.6% to 1% by weight of cement. Also, **Supaflo R3** at 1% - 1.4% by weight of cement.

Products and Quantities Supplied

Centrum Plaza site	Hyperplast PC711	32 MT
Enigma site	Supaflo R3	65 MT

Supply Period

2013 to 2015



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