

# SUPERtect™

High-strength concrete

## GREATER DESIGN FREEDOM WITH SUPERIOR STRENGTH

SUPERtect is a dynamic, high-performance concrete mix with high strength (8,000-14,500 psi), superior durability and rigidity (min. 5,800 ksi), making it ideal for demanding structural applications.

### Primary Features

#### HIGH-STRENGTH 8,000-14,500 psi

Significantly higher compressive strength than conventional concrete

- Slender structural members
- Thinner slabs and longer spans with less supports
- Ease of placement and consolidation without influencing strength
- Reduced shoring and stripping time because of high early strength gain
- More usable, functional space with added room for utilities
- Faster and more efficient construction process

#### SUPERIOR DURABILITY

Substantially improved durability compared to conventional concrete

- RCPT value below 750 C (based on Rapid Chloride Penetration Test)
- Excellent corrosion resistance
- Longer service life in severe environments
- Reduced maintenance and repairs
- Higher abrasion resistance
- High resistance to freezing and thawing, chemical attack, and crack propagation
- Lower creep and shrinkage
- Superior long-term service performance under static, dynamic, and fatigue loading

#### SUPERIOR RIGIDITY 5,800 ksi

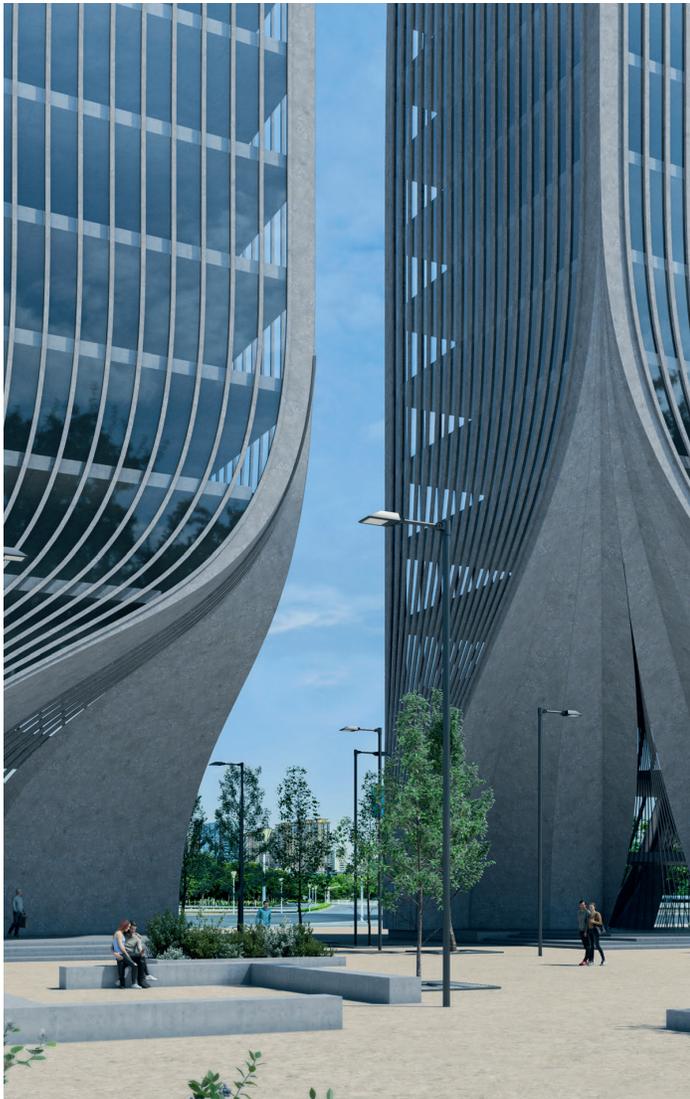
At least 60% higher rigidity compared to conventional concrete

- Wide-span construction
- Higher seismic resistance
- Smaller foundations
- Reduced elastic deformations
- Reduced axial shortening of compression supporting members
- Reinforcement design optimization
- Reduction of formwork area and its cost

	<b>SUPERtect</b> Entry-level product focusing on the high-strength of the concrete in the range from 8,000-14,500 psi	<b>SUPERtect<sup>XD</sup></b> The XD offer for extra durability is a more technically advanced product on durability through reduced permeability of the concrete	<b>SUPERtect<sup>XR</sup></b> The XR offer for extra rigidity is specifically designed with high-rise structures in mind, focusing on high stiffness through a minimum value of the E-Modulus	<b>SUPERtect<sup>XRD</sup></b> Top of the line product that meets the technical requirements of extra rigidity and durability, combined with a high-strength for the most challenging products
<b>HIGH-STRENGTH</b>	✓	✓	✓	✓
<b>SUPERIOR DURABILITY</b>		✓		✓
<b>SUPERIOR RIGIDITY</b>			✓	✓

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## Project Applications

SUPERtect is a High Performance Concrete (HPC) ideal for:

- Long-span bridges with high loads
- Highly exposed and loaded building elements

## Environmental Benefit

Enables you to reduce the overall carbon footprint of the building

- Optimized design, saves valuable raw materials, including steel and aggregates
- Reduces transport due to lower concrete volume
- Smaller foundation for lower building dead loads
- High load-bearing capacity enables slimmer columns, maximizing usable floor area and parking space

## Specification Note

SUPERtect HPC is an alternative to conventional concrete in challenging structural projects, making the overall design of structures more efficient and sustainable in reducing their carbon footprint.

SUPERtect HPC is also a value-added substitution of conventional concrete, making the overall design of structures more efficient and sustainable through resource reduction and prolonged life cycles.