

ANTAEUSHPC

High Performance Concrete



Value Engineering in Performance and Sustainability

Design Freedom and Structural Reliability



INTERBETON
A TITAN GROUP COMPANY



High-Performance Concrete for the Architecture of Tomorrow

INTERBETON, a member of the TITAN Group, develops ready-mixed concrete solutions engineered to meet the most demanding specifications of the construction industry of today and tomorrow. Driven by technological excellence and a commitment to sustainability, it creates solutions and delivers products that enhance quality, safety, and long-term performance in construction.

ANTAEUS HPC is INTERBETON's next-generation High-Performance Concrete (HPC). Designed for pioneering architectural solutions and demanding infrastructure works, it combines exceptional technical characteristics with top-tier environmental performance.

Engineering of the Future for High-Rise Construction

ANTAEUS HPC is INTERBETON's new-generation High-Performance Concrete, engineered to redefine the boundaries of modern construction and sustainability. It delivers unmatched technical advantages and outstanding environmental performance, making it ideal for demanding structures such as high-rise buildings that require exceptional architectural flexibility and design foresight for future re-purposing during their service life.

Compared to conventional concretes, ANTAEUS HPC offers:

- 20%–35% higher modulus of elasticity,
- Significantly improved resistance to chloride and CO₂ ingress, as measured by electrical charge (Coulombs) under ASTM C1202,
- 20%–30% reduction in material consumption, as it requires less concrete and steel per unit of strength.

ANTAEUS HPC enables modern and sustainable construction while reducing the use of natural resources and materials. Its exceptional strength and high modulus of elasticity significantly reduce the consumption of concrete and steel, without compromising safety or aesthetics. As a result, each project gains more usable floor area, has a smaller environmental footprint, and real added value, while also improving overall efficiency and extending the structure's service life without increasing budget requirements.

The product is accompanied with Environmental Product Declaration (EPD*), and its technical characteristics have been developed and validated in collaboration with the Democritus University of Thrace.

Produced in INTERBETON's state-of-the-art, fully automated concrete plants, ANTAEUS HPC ensures consistent quality and excellent environmental performance, contributing to resilient, durable, and sustainable structures with an extended service life.

* EPDs (Environmental Product Declarations) are certified documents providing transparent reporting of a product's environmental performance across its entire life cycle, including CO₂ emissions, energy use, raw materials, and other indicators, according to international standards.

Key BENEFITS Antaeus

Design Flexibility

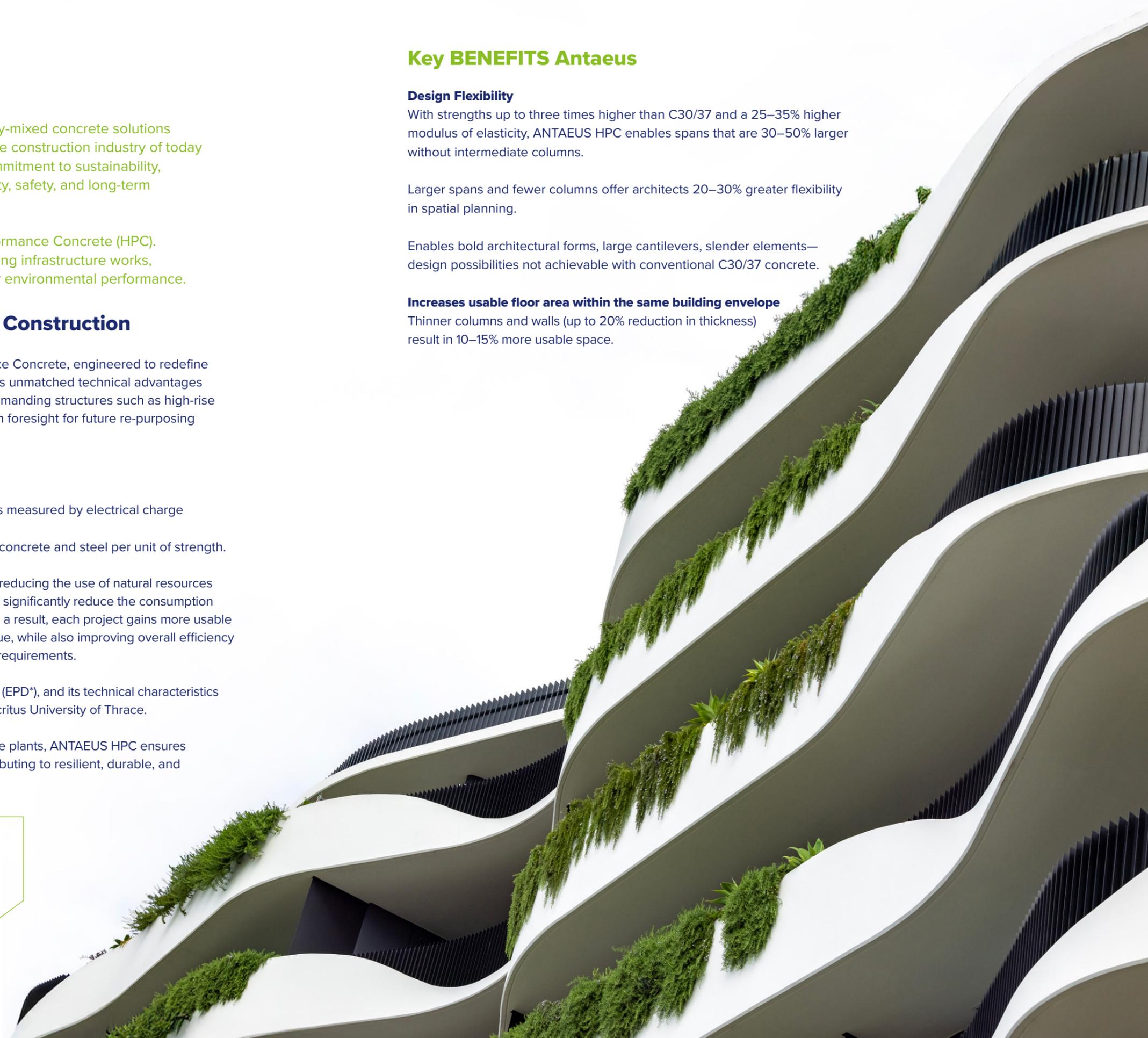
With strengths up to three times higher than C30/37 and a 25–35% higher modulus of elasticity, ANTAEUS HPC enables spans that are 30–50% larger without intermediate columns.

Larger spans and fewer columns offer architects 20–30% greater flexibility in spatial planning.

Enables bold architectural forms, large cantilevers, slender elements—design possibilities not achievable with conventional C30/37 concrete.

Increases usable floor area within the same building envelope

Thinner columns and walls (up to 20% reduction in thickness) result in 10–15% more usable space.



Unmatched Technical Performance

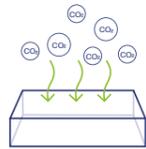
ANTAEUS HPC offers unique technical advantages, making it ideal for demanding projects such as skyscrapers and complex architectural structures. The combination of high compressive strength, superior flexural performance, high modulus of elasticity, and optimal rheology ensures structural reliability, construction efficiency and design freedom.

Technical Characteristics

- Strength classes: C50/60 to C90/105
- High resistance to aggressive exposure environments
- High modulus of elasticity: Ideal for slender façades, exposed architectural elements, large spans, and panoramic windows, enabling optimal interior space use
- Excellent rheology: Easy pumping and placing, even in heavily reinforced elements. Ideal for composite concrete–steel structures, minimizing shrinkage and cracking during curing
- Pumping capability: Up to 150+ meters—ideal for high-rise construction
- Available with aggregate sizes 4–31.5 mm, depending on strength class
- Available in white or colored variants for architectural applications

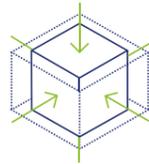
Exceptional Durability for Long-Life Structures

ANTAEUS HPC is engineered to maximize durability and extend the service life of structures even in highly aggressive environments. Its advanced formulation provides robust protection against environmental and mechanical stresses.



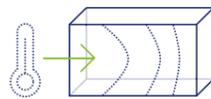
Outstanding resistance to carbonation & chloride ingress

Its very low permeability to CO₂ and chlorides protects reinforcement from corrosion, making it ideal for coastal, urban, and industrial environments.



Low shrinkage & high dimensional stability

Minimizes cracking during curing, enhancing structural continuity, preventing damage, and reducing long-term maintenance needs.



High modulus of elasticity

Ensures optimal performance under seismic loads and thermal variations.

Technical Benefits with Architectural Impact

ANTAEUS HPC is more than a high-performance concrete; it is a structural tool enabling design freedom for innovative architectural solutions. By combining advanced technology, engineering precision, and environmental responsibility, it offers unique flexibility and clear economic advantages for buildings designed to endure and perform.

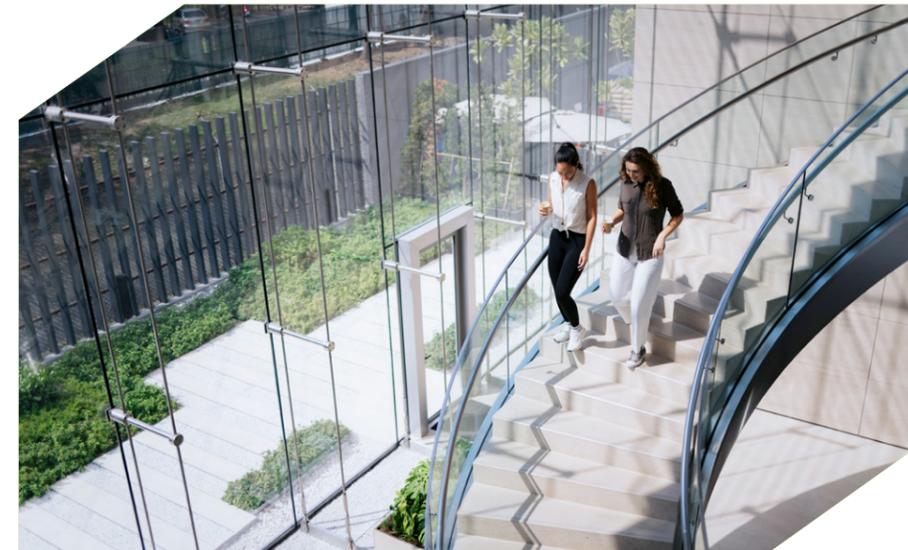
Key advantages:

- Supports elegant, slender architectural forms thanks to its high compressive strength (C50/60 to C90/105) and a high modulus of elasticity
- Enables large spans, cantilevers, and slender columns, increasing and optimizing usable space
- Ideal for composite concrete–steel structures, leveraging the coordinated performance of both materials

Range of ANTAEUS HPC Ready-Mix Concretes

	C50/60	C60/75	C70/85	C80/95	C90/105
S4 max aggregate size 16 mm	●	●	●	●	●
S4 max aggregate size 8 mm	●	●	●	●	
S4 max aggregate size 4 mm	●	●			

All ANTAEUS HPC mix designs are accompanied by certified Environmental Product Declarations



For more information, please refer to the ANTAEUS HPC Technical Description brochure.

Sustainability & Environmental Excellence

ANTAEUS HPC has been developed in line with the TITAN Group's commitments on climate change, offering long-term performance with a reduced overall environmental footprint. It is classified as A+ by VESTA™, an innovative sustainability rating system that evaluates ready-mix concrete based on environmental criteria.

Choosing ANTAEUS HPC ensures high environmental performance, reducing a project's carbon footprint and enhancing sustainability across all construction stages, while simultaneously delivering structural superiority and durability.



Environmental Benefits of ANTAEUS HPC

Local Production, Lower Impact

Produced locally in INTERBETON's fully automated plants, minimizing transport requirements, ensuring consistent quality, and reducing environmental transport costs.

Low Emissions, High Strength

Substantially reduces carbon footprint per unit of strength through optimized material proportions and advanced admixtures.

Longer Service Life, Fewer Resources

Its optimized formulation extends the useful life of the structure and reduces the emissions and resources required for repairs and maintenance.

Thinner Structural Elements, Same Strength

Enables the construction of thinner load-bearing elements, reducing concrete and steel consumption while maintaining structural capacity.

100% Recyclable

Fully recyclable at the end of a structure's life cycle, allowing aggregate reuse and significantly reducing the need for extraction of new raw materials.

Verified Sustainability

ANTAEUS HPC holds a Type III Environmental Product Declaration (EPD) and contributes to improved environmental project ratings under standards such as LEED and BREEAM.

INTERBETON has developed the VESTA® system, a certified tool for assessing the environmental performance of its concretes, based on CO₂ footprint calculations and life cycle assessment. VESTA® has been implemented since 2022 and is certified by the independent body BV, accredited by ESYD.



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Contact our team for more information on how
ANTAEUS HPC can support your project.

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