



QuantumUHPC

Gray

QuantumUHPC, with or without fibre, is a superior-grade concrete material known for its combination of high strength, high durability, excellent crack control, and perfect flowability. It is formulated using cementitious materials, sand/aggregates and advanced admixtures to achieve unparalleled performance in various construction applications.

APPLICATIONS

QuantumUHPC is appropriate for a broad spectrum of structural applications, especially where superior mechanical behaviour and improved durability are needed. Some applications are (but not limited to):

- High-rise buildings
- Bridge decks and overlays
- Marine structures
- Precast elements
- Industrial flooring
- Architectural facades
- Infrastructure rehabilitation

ECOLOGICAL

Durability reduces the need for repair and replacement. Possibility to use recycled materials as part of the mix and reduce overall carbon footprint with optimized design.

CO₂ REDUCTION

81 kg/m³

PRIMARY ENERGY REDUCTION

376 MJ/m³

REDUCE MATERIAL

Up 30%

QUALITY

Increased

POROSITY

Decreased

WORCABILITY

Stabilized

COMPRESSIVE STRENGTH

150 MPa

FLEXURAL STRENGTH

25 MPa

COLORE

Gray



UHPC

COMPOSITIONS and MATERIALS

QuantumUHPC is composed of high-quality raw materials, including cementitious materials, sand/aggregates, and admixtures, all pre-mixed for convenience. On the construction site, only water needs to be added.

QuantumUHPC can be delivered with or without fibres.

TECHNICAL PARAMETERS

- compressive strength: up to 230 MPa with fibers
- compressive strength: 180MPa (28d) with high energy mixer
- compressive strength: 120MPa - 150MPa (28d) with simple compulsory mixer or planetary mixer
- flexural strength (matrix): up to 19 MPa with high energy mixer
- flexural strength (reinforced) up to 75 MPa
- fracture energy 50 - 90 kN/m
- possible unit thickness > 5 mm
- carbonating 1.5 mm after 3 years
- chloride-diffusion: no capillary pores, not measurable with standard methods
- water resistance: no capillary pores, not measurable with standard methods
- frost-resistance < 100 g/m²
- shrinkage 1 - 1.5 ‰
- crack width << 0.1 mm
- density 2.300 kg/m³

QuantumFusion — your technology partner for working with white UHPC

At **QuantumFusion**, we understand that working with UHPC is more than just purchasing a material — it's a complete process where every detail matters. That's why we offer not only high-quality white UHPC mix, but also full technical support.

Our team helps set up production, adapt the mix design to your specific needs, train your staff, and ensure consistent quality at every stage. We're with you from the first batch to full-scale production — so you get not just a product, but confidence in the result.

QuantumFusion — UHPC with intelligence, experience, and support.

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**SOLVING CONCRETE
CHALLENGES,
BUILDING
BETTER FUTURE**