OLTRE
CASTINGS & DESIGN

OHPC

Oltre High-Performance Composite

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Product Overview

Oltre High-Performance Composite is a proprietary glass-fiber–reinforced (or otherwise advanced-admixture) composite formulated to deliver premium architectural castings with high strength, refined finish and reliable performance. The material is engineered for non-structural architectural applications – cladding, surround elements, decorative but load-capable cast components (but not intended for primary structural load-bearing). Manufactured under controlled conditions for consistent density, colour, texture and mechanical performance.

Property	Test Method (ASTM/Equivalent)	Result	Notes
Compressive Strength (28-day)	ASTM C-39	13,000 – 16,000 psi	Based on 0.30 W/C ratio using 4×8 in. cylinders
Flexural Strength (28-day)	ASTM C-947	2,000 – 2,900 psi	High ductility and controlled deflection
Length Change (Shrinkage)	ASTM C-494	−0.004 to −0.005	Excellent dimensional stability
Density	ASTM C-138	~130 lb/ft³	Dense, low-porosity matrix
Water Absorption	ASTM C-642	< 4 %	Low permeability and capillary action
Fire/Combustibility	Non-combustible	—	Cementitious, inorganic matrix; will not burn or emit smoke
Thermal Resistance (R-value)	—	Not Applicable	Material is dense and not intended for insulation

Material Advantages

◇ Architectural Precision: Captures fine details and clean geometry ideal for high-end cast elements.

◇ Structural Reliability: High compressive and flexural strength ensures dimensional stability.

◇ Durability: Withstands freeze–thaw cycling, acid exposure, and environmental wear.

◇ Non-Combustible: Safe for both interior and exterior applications; contributes zero fuel in a fire event.

◇ Low Maintenance: Resists fading, staining, and biological growth; requires only occasional cleaning.

◇ Consistency: Controlled manufacturing ensures uniform color, finish, and performance.

Fire Clearance & Fireplace Installation

Oltre High-Performance Composite is a fully mineral cementitious composite — cement, aggregate, and alkali-resistant glass reinforcement — with no organic binders, resins, or combustible fibers. The material does not burn, does not emit smoke, and contributes zero fuel in a fire event.

Installation adjacent to gas, wood, and electric fireplace appliances:

◇ OHPC surrounds, mantels, legs, and hearth components may be installed adjacent to the appliance surround opening, subject to the fireplace manufacturer's installation instructions.

◇ Fireplace manufacturers' installation manuals distinguish between combustible and noncombustible facing materials, with noncombustible facings permitted at substantially tighter clearances for mantel legs, wall projections, and hearth extensions. Because OHPC is a mineral cementitious material with no organic content, it falls within the noncombustible facing category defined in those manuals.

◇ OHPC withstands continuous service at the surround-opening surface temperatures published by major gas-fireplace manufacturers (typically under 200 °F within 12 inches of the top of the surround opening) with no degradation, discoloration, or off-gassing.
◇ Thermal Behavior: Acts as a thermal mass material—does not provide insulation or R-value performance.

◇ Where the fireplace manufacturer specifies a clearance-to-combustibles air gap (e.g., 1/4 inch under an insert), that gap applies to adjacent combustible framing — not to OHPC components themselves.

Always defer to the fireplace manufacturer's installation manual for final clearance dimensions. OHPC's mineral composition places it within the noncombustible facing column; it does not override the appliance manufacturer's published minimums.

Industry standards that govern noncombustible facing materials in fireplace installations include ASTM E 136, IBC §703.5, IRC §R302.1, and NFPA 211.

Sustainability

◇ Optimized mix design reduces cement content and embodied carbon.

◇ Long service life and minimal maintenance lower lifecycle impact.

◇ Manufactured under controlled conditions with limited waste.

◇ Fully recyclable at end of service life as inert aggregate.

Design & Specification Notes

◇ Intended Use: Non-structural architectural components such as cladding, mantels, surrounds, hearths, and decorative panels.

◇ Structural Applications: Not intended or rated for primary load-bearing use.

◇ Applicable Standards: Meets ASTM C-494 Type S requirements for high-performance admixtures.

◇ Finish Options: Smooth, sandblasted, honed, bush-hammered, or acid-etched finishes; custom pigments and limestone tones available.

◇ Installation: Compatible with standard anchoring and mounting systems for cast stone and GFRC panels.

◇ Thermal Behavior: Acts as a thermal mass material—does not provide insulation or R-value performance.

◇ Color & Finish Consistency: Oltre provides sample pieces or mock-ups for color and finish approval before production to ensure the final product meets project expectations.

Quality Assurance

Oltre products are produced in a dedicated facility with over 15 years of experience in manufacturing architectural cast units and high-performance composites. Every batch is made under controlled environmental conditions using precise mix formulations and calibrated equipment to ensure consistency and strength.

Each piece undergoes visual and dimensional quality checks prior to packaging, including color verification against approved samples.
Our quality control process follows recognized industry standards, including ASTM C-39, C-494, and C-947, for material performance validation.

All Oltre High-Performance Composite products are crafted in the U.S.A. and backed by our commitment to reliability, precision, and architectural integrity.

Custom Options & Production Overview

Every Oltre piece begins with precision craftsmanship and a design-driven process that ensures both performance and beauty.

1. Design & Collaboration
Oltre works closely with architects, designers, and distributors to translate concept drawings into technical shop drawings and mold designs. Each project begins with an approved design and color direction.

2. Sample & Approval
A physical mock-up or sample piece is provided for approval, confirming the final color, texture, and finish before production begins. This sample establishes the visual benchmark for the project.

3. Casting & Curing
Each piece is cast using our proprietary high-performance composite, ensuring consistent density, color, and surface quality. Controlled curing conditions provide superior strength and dimensional stability.

4. Finishing & Quality Control
All products are hand-finished and inspected before packaging. Every batch is reviewed against the approved sample for color and texture accuracy.

5. Lead Times
Typical production lead times range from 4–8 weeks depending on project scale and customization. Expedited production may be available upon request.
Oltre maintains flexible scheduling to meet project deadlines while ensuring precision and quality in every cast.

Maintenance / Care Instructions

Oltre High-Performance Composite is designed for long-term durability and minimal maintenance. The dense, non-porous matrix resists staining, fading, and environmental wear.

Cleaning: Use a soft brush or cloth with mild, pH-neutral detergent and water. Avoid harsh acids or pressure washing that could damage the surface.

Protection: For exterior installations, inspect sealant joints annually and ensure proper drainage behind cladding or panels.

Repairs: Minor chips or surface blemishes can often be refinished or touched up using Oltre-approved materials to maintain color consistency.

Longevity: Proper installation and periodic care ensure decades of performance with minimal upkeep.