Oltre Castings *& Design*

1947 Claxter Rd NE, Salem, OR 97301 · (971) 314-9530 · oltreusa.com · info@oltreusa.com

GFRC *Material Performance Statement*

ISSUED 2026-10-15 · GENERIC REFERENCE DOCUMENT

Oltre Castings & Design manufactures cast stone fireplace surrounds, mantels, hearths, and architectural elements at our Claxter Road workshop in Salem, Oregon. This statement documents the composition and thermal performance of **glass fiber reinforced concrete (GFRC)**, the material every Oltre cast stone fireplace surround is made from. It is intended as a reference for builders, architects, interior designers, installers, and inspectors reviewing material and clearance requirements during installation.

Material Composition

Oltre's GFRC is a cementitious composite made mainly of mineral materials: Portland cement, graded quartzite sand, silica fume, an admixture, and alkali-resistant glass fiber reinforcement. The finished material has not been tested to ASTM E 136, so the firebox or insert maker's clearances and local code decide placement.

Most premium fireplace appliance installation manuals (Heat & Glo, Napoleon, Valor, Mendota, and equivalent classifications across the major manufacturers) reference **ASTM E 136** as the governing standard for non-combustible-material classification. ASTM E 136 is conducted at a furnace temperature of 750 °C (1,382 °F). Because Oltre's GFRC has not been tested to ASTM E 136, this statement does not classify it as non-combustible. Where an appliance manual or local code calls for a non-combustible facing, the installer and the inspector confirm whether this material is accepted, and the appliance manufacturer's clearances govern the installation.

Thermal Performance

At the operating wall-surface temperatures published by mainstream zero-clearance and direct-vent fireplace manufacturers (typically ranging from 90 °F to 220 °F at the immediate facing within 12 inches above the firebox opening), the facing stays far below the temperatures at which a Portland-cement matrix begins to change, as the reference points below show.

- Portland-cement hydrates remain chemically and structurally stable through approximately 300 °C (572 °F) with no measurable strength loss.

- Above 300 °C, gradual dehydration begins; structural integrity is preserved through approximately 500 °C (932 °F). These temperatures are well above any wall-surface temperature published by a mainstream fireplace appliance manufacturer.
- The alkali-resistant glass fiber reinforcement in GFRC is an inorganic glass fiber.

Scope of This Statement

This document addresses the **material properties and thermal performance of Oltre's GFRC**. The installation clearance dimensions for a specific fireplace appliance, including the minimum vertical and maximum horizontal clearances published by the appliance manufacturer, are set by the appliance manufacturer based on the appliance's thermal output and UL listing. Those dimensions are coordinated between the project builder and the fireplace installer, and they govern the installation. They are not properties of the facing material and are not within Oltre's scope of certification.

> **For project-specific inspector escalations:** Oltre can issue a project-specific Material Performance Letter on letterhead referencing the named appliance, installation manual document number, and manual section/figure references for facing-material and clearance requirements. Request via email to info@oltreusa.com with the appliance make, model, and installation address.

Oltre Castings & Design remains available to answer product-specific questions, provide technical specifications, and coordinate field support for any active project.

Sincerely,

Andrew Shpiruk
DIRECTOR OF OPERATIONS · OLTRE CASTINGS & DESIGN

This statement is reference documentation. For project-specific inspector escalations requiring named appliance references and manual section citations, Oltre issues a project-specific letter on letterhead. The installation manual for the appliance governs installation clearance dimensions; this document does not modify or supersede those clearances. © Oltre Castings & Design.