

Furnace Lining Repair

PyroFast, PyroGun, & Quick-Stick



Pyrotek offers a full range of products for melting and holding furnace lining repair, including: PyroFast for casting applications, PyroGun for gunning applications, and Quick-Stick for patching applications. The advanced technology of this product family uses a unique liquid phosphate bonding system that translates into improved performance and faster turn-around times.

Product Line Benefits

Fast Repair

- *Fast Setting* – Due to the designed exothermic reaction, the set time is typically less than 25-30 minutes, depending on ambient temperatures. Repairs cure in hours versus days for conventional low-cement castables.
- *Rapid Heat-up*– PyroFast & PyroGun products are less vulnerable to spalling during heat-up as compared to traditional cement bonded refractory. This is attributed to the unique exothermic reaction of the product, which aids in removing moisture prior to firing. This resistance to explosive spalling allows faster heat-up (saving days of furnace downtime) compared to conventional low-cement castables.

Long Lasting

- *Thermal Shock Resistance* – Many cement bonded refractories are sensitive to sudden changes in temperature, leading to thermally induced cracking failures. PyroFast & PyroGun products are less sensitive to thermally induced mechanical stresses due to their relatively high modulus of elasticity.
- *Permanent Chemical Bond* – PyroFast & PyroGun products are designed to chemically bond together and to traditional hardened refractories better than the mechanical bonds found in conventional low cement repair materials.

Non-Wetting

- *Easier corundum removal* in furnaces containing alloys (Si, Mg, Zn) vs. low cement, high alumina refractories.
- *Non Wetting Properties* – PyroFast & PyroGun products utilize a multi-phase ceramic structure that develops exceptional non-wetting properties for molten aluminum. This bonding system reduces the amount of corundum transformation and integration into the hotface providing less build-up and easier cleaning characteristics.

Excellent Usability

- *Mixing time* – PyroFast & PyroGun products are a two component system that utilizes pre measured and weighted aggregate and liquid activator. The mixing time is typically less than two minutes and has an improved working time and flow ability of 25-30 minutes for easy placement of the material.

Product Support:

Pyrotek technical specialists are available to assist in specifying the best materials for each use, applications, and dryout procedures for the entire furnace lining repair product family.

Special equipment and instruction are required for gunning applications. Pyrotek specialists are available for assistance on site. Gunning equipment is also available if required.

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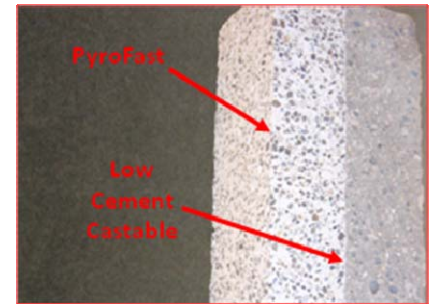


PyroFast 233, 234, & 235

PyroFast is available in three formulations specially developed for different furnace applications. The PyroFast refractory system is designed around a two component technology which incorporates a dry refractory aggregate mixed with a liquid binder. This material can be effectively mixed and placed on-site, working well for both casting and patching.

Typical Furnace Applications

PyroFast Formulation			
233	234	235	340
<ul style="list-style-type: none"> • Roofs • Upper Walls 	<ul style="list-style-type: none"> • Lower Walls • Belly Bands • Doors, Lintels, Sills, & Jambs • Charge Well / Pouring Blisters 	<ul style="list-style-type: none"> • Lower Walls • Belly Bands • Doors, Lintels, Sills, & Jambs • Charge Wells / Pouring Blisters 	<ul style="list-style-type: none"> • Lower Walls • Belly Bands • Doors, Lintels, Sills, and Jambs • Charge Well • Ramp



PyroGun 243, 244, & 245

PyroFast is available in three formulations specially developed for different furnace applications. The PyroGun refractory system is designed around a two component technology which incorporates a dry refractory aggregate mixed with a liquid binder. These materials can be effectively gunned on-site, working well for patching. Gunning incorporates the dry refractory aggregate using PyroPhos liquid binder as the nozzle accelerant and as a pre-dampening liquid if desired.

Typical Furnace Applications

PyroGun Formulation		
243	244	245
<ul style="list-style-type: none"> • Roofs • Upper Walls 	<ul style="list-style-type: none"> • Lower Walls • Belly Bands • Doors, Lintels, Sills, & Jambs • Charge Well / Pouring Blisters 	<ul style="list-style-type: none"> • Lower Walls • Belly Bands • Doors, Lintels, Sills, & Jambs • Charge Wells / Pouring Blisters



Quick-Stick 8087

The Quick-Stick formulation is a versatile refractory patching material to fill holes, repair trough sections that are badly damaged and similar small repair jobs. It can be poured, trowelled, veneered, or painted on refractory surfaces requiring repair. Due to the fast setting characteristics, high green strength, and excellent adhesion of Quick-Stick, immediate dryout is possible.

Technical Property	Temperature			
	150°C	315°C	540°C	815°C
Permanent Linear Change	0.0%	-0.1%	-0.1%	-0.2%
Density (g/cm ³)	2.83	2.79	2.76	2.73
MOR (MPa)	9.0	9.0	9.3	9.8
HMOR (MPa)				13.4
CCS (MPa)				35.7