



## THE THERMBOND® ADVANTAGE

Thermbond® Refractory Products are a complete line of engineered refractory materials. The unique features of the patented Stellar Binder System™ enable Thermbond Refractories to deliver superior performance on the new installations, repairs, and pre-cast productions. *The Thermbond Advantage* translated into **less downtime, more production time and greater value.**

FEATURE	PROPERTIES AND BENEFITS
<b>EASY AND ACCURATE MIXING</b>	The two components are pre-measured in bags and jugs for easy and accurate mixing. Mixing time for most products is less than 1 minute. <b>Thermbond eliminates the waiting time required when using other materials to “wet out.”</b>
<b>CONTROLLED SETTING</b>	Thermbond® Refractories normally do not require curing. The curing process is finished after the exothermic reaction is complete. Depending on installation requirements and ambient conditions, <b>Thermbond formulations are available with a wide range of setting and curing characteristics.</b>
<b>FAST DRY-OUT AND HEAT-UP</b>	Thermbond® Refractories are less susceptible to explosive spalling during dry-out and heat-up than cement-bonded materials that mix with water. Depending on the lining thickness and configuration, <b>linear heat up rates of 500° F (260° C) per hour, with no holds, can be achieved with Thermbond.</b>
<b>THERMAL SHOCK RESISTANCE</b>	Compared to cement-bonded materials, Thermbond® Refractories demonstrate a lower modulus of elasticity at high temperatures. Because of low thermal expansion, high thermal conductivity, high fracture energy, and high strengths, <b>Thermbond is resistant to spalling under the stress of repeated thermal cycling.</b>
<b>BONDS PERMANENTLY TO EXISTING REFRACTORY</b>	Thermbond® chemically bonds to itself and other fired refractories, creating strong repairs with no laminations. <b>Thermbond’s unique bonding capability allows for less tear out, faster repairs and more time in production.</b>
<b>NON-WETTING</b>	Thermbond® has unsurpassed non-wetting characteristics in Molten metal contact, even at elevated temperatures. <b>With less build-up, Thermbond users spend less downtime for cold cleaning.</b>

*Please contact Stellar Materials to discuss your specific application requirements.*

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\*The Stellar Binder System™ is a patented mono-phosphate ionic bonding technology

that involves two components including a dry mix and a liquid activator.