

# **GUNTECH Gun Mixes**

HWI's GUNTECH<sup>®</sup> gun mixes have been designed for easy installation without compromising installed properties. As the latest addition to our product portfolio, these mixes offer extremely low dust and rebound rates, a wide water range, and ON-LINE<sup>®</sup> rapid cure/rapid fire technology for faster turnaround.

### **GUNTECH® 60 AR**

This workhorse maintenance gun mix requires no predampening and has a wide water range. Dryout can begin immediately after the material has set.

- Excellent alkali resistance
- Low rebound
- No pre-dampening
- ON-LINE<sup>®</sup> performance
- High strength (HMOR,CCS)
- Good abrasion resistance

#### **GUNTECH® 60 Z**

This mix has all of the benefits of GUNTECH, but also contains zirconia for alkali and thermal shock resistance.

#### **GUNTECH® 65 AL**

This mix has of the benefits of GUNTECH but contains an aluminum inhibitor for increased resistance to aluminum metal penetration.

### **GUNTECH® 60**

This mix is the foundation of GUNTECH chassis and provides the best mechanical performance.

### All GUNTECH brands are ON-LINE® rated

- Engineered to set in 4-6 hours
- Quickly develops strength
- Start dryout immediately after set
- Heat at 100°F (55°C)/hour



#### **POTENTIAL APPLICATIONS**

- Circulating fluidized beds
- Incinerators
- Taconite furnaces
- Minerals processing rotary kilns and coolers
- Boilers & wood burning units
- Cement preheaters and risers
- Aluminum furnace repairs to lower sidewalls
- Aluminum furnace belly bands, ramps, and door jambs



Just as HWI strives to be the first and only call for refractory solutions, GUNTECH<sup>®</sup> strives to be the first and only product for maintenance work. No matter what work needs done, GUNTECH<sup>®</sup> is there to do it. To that end, HWI designed GUNTECH<sup>®</sup> products to be capable of installing via handpacking and veneering.

# HAND PACKING

Every maintenance job faces a unique set of repair challenges and conditions. A good maintenance monolithic needs to be usable in an array of different conditions. That's why HWI developed GUNTECH<sup>®</sup> with versatility in mind. In addition to being a user-friendly gun mix, GUNTECH<sup>®</sup> products are also capable of being handpacked.

- 11 12.5% water addition
- 1 minute mixing time
- 20 minute working time



## **GUNTECH®**

Keep GUNTECH<sup>®</sup> in your shop for when sudden and unexpected repairs arise. The rugged installation characteristics, like low rebound and wide water range, mean great results every time.

The ON-LINE<sup>®</sup> turnaround will get your operation back up and running quickly, and the premium HWI gun mix installed properties will keep it that way.

With an installed lining thickness of 9" (23 cm) or less, you can be dried out up to 1500°F (816°C) in as little as 20 hours.





*GUNTECH*<sup>®</sup> being installed over existing refractory before (above) and after (below)

# FLASHING

GUNTECH<sup>®</sup> brands are specifically engineered with an optimal additive matrix. This matrix design enables GUNTECH<sup>®</sup> mixes to adhere well to existing refractory inings, with little to no loss in strength at the refractory interface. Save time and material by avoiding tearouts altogether, veneering GUNTECH<sup>®</sup> directly over the existing material.

- Install procedure as when installing new refractory
- No need for complex surface treatment
- Excellent adherence to existing material

	GUNTECH® 60	GUNTECH® 60Z	GUNTECH® 60 AR	GUNTECH® 65 AL
Alumina (Al <sub>2</sub> O <sub>3</sub> ), %	59.8	56.9	53.4	67.4
Maximum Service Temperature, °F (°C)	3000 (1650)	3000 (1650)	3000 (1650)	2600 (1427)
Material Required, lb/ft <sup>3</sup> (g/cm <sup>3</sup> )	138 (2.21)	142 (2.27)	133 (2.13)	141 (2.26)
Bulk Density, lb/ft³ (g/cm³) after 230°F (110°C) after 1500°C (816°C)	145 (2.32) 138 (2.21)	147 (2.35) 142 (2.27)	137 (2.19) 133 (2.13)	146 (2.34) 141 (2.26)
Modulus of Rupture, lb/in² (MPa) after 1500°F (816°C)	1800 (12.4)	1400 (9.7)	1700 (11.7)	1100 (7.6)
Cold Crushing Strength, lb/in² (MPa) after 1500°F (816°C)	8000 (55.2)	6000 (41.4)	6000 (41.4)	6500 (44.8)
Abrasion Loss, cc after 1500°F (816°C)	12	11	10	15

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### ADVANCED TECHNOLOGY AND RESEARCH CENTER

HWI's ATRC is for learning, testing, exploration, and innovation. Our ATRC houses some of the brightest minds in the refractory industry. Our team of research and development experts works directly with our customers to design, test, and trial new products and applications.

Services include:

- Research and development of new applications and products
- Customer-focused product development
- Comprehensive technical analysis
- Quality-assurance testing
- Benchmark and failure analysis of

refractory material

- Slag analysis
- Postmortem analysis

• Introductory refractory training to more highly customized education that is specific to your business (at your place or ours).

### DISTRIBUTION CENTERS (DC)

The refractory products you need, when you need them. We deliver like a world-class pro.

Our strategically placed distribution centers throughout North America provide one of the quickest response times in the industry

• Dedicated sales personnel ready to respond 24/7/365

- Ready-to-ship inventory of our bestselling products
- Usually shipping with same-day or nextday delivery
- Staging and shipping to anywhere in the world
- Inventory solutions tailored to your business

### **C/I NETWORK**

HWI is associated with a preferred network of independent contractor/ installers who, like us, work intensely to provide high-quality refractory construction and maintenance services.

From small emergency repairs to new plant construction, these companies have the skills, resources, and experience to meet your most demanding specifications and time constraints.

We invite you to get to know HWI's preferred contractor/installers. Look into their wide range of refractory industry experience. See why they have satisfied customers from coast to coast and around the globe.

To contact them directly, refer to our contractor/installer listings. And if you'd like more information about the C/I network, email CINetwork@ thinkHWI.com.