

## Description: Rapid Turn-Around, Low-Cement Gunning Mix

- Features:
- Designed to set quickly.
  - Can be dried out rapidly; dryout may be started immediately after the material has set.
  - Excellent alkali resistance.
  - High refractoriness.
  - Installed using conventional gunning techniques.

- Uses:
- Applications requiring excellent alkali resistance.

## Chemical Analysis: Approximate (Calcined Basis)

Silica (SiO <sub>2</sub> )	38.4%
Alumina (Al <sub>2</sub> O <sub>3</sub> )	55.7%
Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> )	0.8%
Titania (TiO <sub>2</sub> )	2.1%
Lime (CaO)	2.9%
Alkalies (Na <sub>2</sub> O+K <sub>2</sub> O)	0.1%

## Physical Data (Typical when predampening)

## Gunned

Maximum Service Temperature 3100°F (1705°C)

Material Required 136 lb/ft<sup>3</sup> (2.18 g/cm<sup>3</sup>)

Note: No allowance for rebound loss.

Bulk Density	lb/ft <sup>3</sup> (g/cm <sup>3</sup> )
After 220°F (105°C)	142 (2.27)
After 1500°F (816°C)	136 (2.18)
Modulus of Rupture	lb/in. <sup>2</sup> (MPa)
After 220°F (105°C)	1,800 (12.4)
After 1500°F (816°C)	2,100 (14.5)
Hot Modulus of Rupture	lb/in. <sup>2</sup> (MPa)
At 2500°F (1371°C)	630 (4.3)
Cold Crushing Strength	lb/in. <sup>2</sup> (MPa)
After 220°F (105°C)	8,800 (60.7)
After 1500°F (816°C)	8,600 (59.3)
Permanent Linear Change	
After 1500°F (816°C)	-0.3%
Abrasion Loss	
After 1500°F (816°C)	12.0 cc
Thermal Conductivity	Btu·in/hr·ft <sup>2</sup> ·°F (W/m·°C)
At 400°F (205°C)	12.0 (1.73)
At 800°F (425°C)	9.2 (1.33)
At 1200°F (649°C)	9.0 (1.30)
At 1600°F (871°C)	9.3 (1.34)
At 1800°F (982°C)	9.7 (1.40)

Note: The data given above are based on averages of the results of a small number of test specimens made in the laboratory. Variation from the above data may occur in individual tests and in large-scale plant production. The test data cannot be taken as minimum or maximum values for specification purposes. ASTM test procedures used when applicable.

## Product Data

Mixing and Using Information (Water calculated at 8.337 lb/gallon)	55 lb bag	1000 lb bag	1500 lb bag
Predampening Required— Water for Gunning (Weight 2.0%)			
Pounds	1.1	20.0	30.0
Gallons	0.1	2.4	3.6
Liters	0.5	9.1	13.6

**NOTE: Typical properties and projected rebound losses may not be obtained if not predampened.**

For detailed mixing and using instructions, contact your HWI representative or visit [www.thinkHWI.com](http://www.thinkHWI.com).

### Heatup/Dryout Schedule

See HWI Dryout Schedule 9B—ON-LINE Gunning Castables.

### Installation Guidelines

See HWI Installation Guidelines GC-5—Gunning Castables—ON-LINE.

Shelf Life (Under Proper Storage Conditions)	180 days
--	----------