

Description: 3000°F High-Alumina Castable

- Features:**
- Good resistance to numerous slags.
 - Shows expansion rather than shrinkage after heating to elevated temperatures.
 - Good resistance to spalling.
 - Installer friendly.

- Uses:**
- Incinerators.
 - Boilers.
 - Burner Blocks.
 - Aluminum furnace upper sidewalls and roofs.
 - Forge furnaces and foundry ladles.

Chemical Analysis: Approximate (Calcined Basis)

Silica (SiO ₂)	32.6%
Alumina (Al ₂ O ₃)	60.6%
Iron Oxide (Fe ₂ O ₃)	1.2%
Titania (TiO ₂)	2.2%
Lime (CaO)	2.6%
Magnesia (MgO)	0.3%
Alkalies (Na ₂ O+K ₂ O)	0.5%

Physical Data (Typical)

Maximum Service Temperature	3000°F (1650°C)
Material Required	140 lb/ft ³ (2.24 g/cm ³)
Bulk Density	lb/ft ³ (g/cm ³)
After 220°F (105°C)	142 (2.27)
After 1500°F (815°C)	140 (2.24)
Modulus of Rupture	lb/in. ² (MPa)
After 220°F (105°C)	1,100 (7.6)
After 1500°F (815°C)	800 (5.5)
After 2000°F (1095°C)	600 (4.1)
After 2500°F (1370°C)	1,100 (7.6)
Cold Crushing Strength	lb/in. ² (MPa)
After 220°F (105°C)	5,500 (37.9)
After 1500°F (815°C)	3,500 (24.1)
After 2000°F (1095°C)	3,000 (20.7)
After 2500°F (1370°C)	4,000 (27.6)
Permanent Linear Change	
After 220°F (105°C)	-0.1%
After 1500°F (815°C)	-0.2%
After 2000°F (1095°C)	-0.2%
After 2500°F (1370°C)	+0.9%
After 2900°F (1595°C)	+2.8%

Product Data

Thermal Conductivity	Btu · in/hr · ft ² · °F (W/m · °C)
At 400°F (205°C)	7.8 (1.12)
At 800°F (425°C)	7.7 (1.11)
At 1200°F (650°C)	7.6 (1.10)
At 1600°F (870°C)	7.5 (1.08)
At 2000°F (1095°C)	7.4 (1.07)
At 2400°F (1315°C)	7.4 (1.07)

Particle Size	
Maximum Grain Size 4 Mesh (Tyler)	Less than 5%

Note: The test data shown are based on average results on production samples and are subject to normal variation on individual tests. The test data cannot be taken as minimum or maximum values for specification purposes. ASTM test procedures used when applicable.

Mixing and Using Instructions (Water calculated at 8.337 lb/gallon)	55 lb bag	1000 lb bag	1500 lb bag
Water Required—Vibration Casting (Weight 8.6%)			
Pounds	4.7	86.0	129.0
Gallons	0.6	10.3	15.5
Liters	2.1	39.0	58.5
Water Required—Hand Casting/Pouring (Weight 9.0%)			
Pounds	5.0	90.0	135.0
Gallons	0.6	10.8	16.2
Liters	2.2	40.8	61.2

Working Time	20 minutes
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For detailed mixing and using instructions, contact your HWI representative or visit www.thinkHWI.com.

Heatup/Dryout Schedule

See HWI Dryout Schedule 2—PLUS Rated Castables and Gunning Castables.

Installation Guidelines

See HWI Installation Guidelines LCC-1—Low Cement Castables—Standard.

Note: LCC-1 is the intended designation due to technical justification of brand.

Shelf Life (Under Proper Storage Conditions)	365 days
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