

SUPER KAST-SET® PLUS



Product Data

02/05: 6194

Description: General-Purpose Pouring Castable

- Features:
- Good permanent volume characteristics.
 - High strength to produce stable linings for long service.
- Uses:
- Pouring special shapes and complete monolithic linings.

Chemical Analysis: Approximate (Calcined Basis)

Silica (SiO ₂)	40.0% to 44.0%
Alumina (Al ₂ O ₃)	45.0% to 49.0%
Iron Oxide (Fe ₂ O ₃)	1.2% to 2.0%
Titania (TiO ₂)	1.8% to 2.8%
Lime (CaO)	3.7% to 5.0%
Magnesia (MgO)	0.1% to 0.4%
Alkalies (Na ₂ O+K ₂ O)	0.5% to 1.3%

Physical Data (Typical)

Maximum Service Temperature	2800°F (1540°C)
Material Required	124 lb/ft ³ (1.99 g/cm ³)
Bulk Density	lb/ft ³ (g/cm ³)
After 220°F (105°C)	125 to 132 (2.00 to 2.12)
After 1500°F (815°C)	120 to 127 (1.92 to 2.04)
Modulus of Rupture	lb/in. ² (MPa)
After 220°F (105°C)	500 to 800 (3.8 to 5.5)
After 1500°F (815°C)	300 to 500 (2.1 to 3.4)
After 2000°F (1095°C)	200 to 400 (1.4 to 2.8)
After 2500°F (1370°C)	800 to 1,400 (5.5 to 9.7)
Cold Crushing Strength	lb/in. ² (MPa)
After 220°F (105°C)	2,200 to 3,200 (15.2 to 22.1)
After 1500°F (815°C)	1,600 to 2,400 (11.0 to 16.5)
After 2000°F (1095°C)	1,000 to 1,500 (6.9 to 10.3)
After 2500°F (1370°C)	2,300 to 3,600 (15.9 to 24.8)
Permanent Linear Change	
After 220°F (105°C)	None
After 1500°F (815°C)	0% to -0.5%
After 2000°F (1095°C)	0% to -0.5%
After 2500°F (1370°C)	-0.6% to +0.5%
After 2700°F (1480°C)	+0.5% to +1.5%
Thermal Conductivity	Btu·in/hr·ft ² ·°F (W/m·°C)
At 400°F (205°C)	6.1 (0.88)
At 800°F (425°C)	6.2 (0.89)
At 1200°F (650°C)	6.2 (0.89)
At 1600°F (870°C)	6.3 (0.91)
At 2000°F (1095°C)	6.6 (0.95)

Particle Size

Maximum Grain Size 4 Mesh (Tyler)	Less than 2%
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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.

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Mixing and Using Information (Water calculated at 8.337 lb/gallon)	55 lb bag	1000 lb bag	1500 lb bag
Water Required—Vibration Casting (Weight 12.0%)			
Pounds	6.6	120.0	180.0
Gallons	0.8	14.4	21.6
Liters	3.0	54.4	81.6
Water Required—Hand Casting (Weight 12.8%)			
Pounds	7.0	128.0	192.0
Gallons	0.8	15.4	23.0
Liters	3.2	58.0	87.0
Working Time	20 minutes		
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 CC-1—Conventional Castables—Standard.			
Shelf Life (Under Proper Storage Conditions)	365 days		