KS®-4V PLUS

HIT HarbisonWalker

Product Data

4/18: 5908

Description: General-Purpose Castable for Temperatures Features: • Low iron content.	·	
 Minimal shrinkage, even when used in la 	irge patches.	
Chemical Analysis: Approximate (Calcined Basis)		
Silica (SiO ₂)	37.0% to 42.0%	
Alumina (Al ₂ O ₃)	45.0% to 49.0%	
Iron Oxide (Fe ₂ O ₃)	1.2% to 2.2%	
Titania (TiO ₂)	2.2% to 4.2%	
Lime (CaO)	6.0% to 8.0%	
Magnesia (MgO)	0.1% to 0.5%	
Alkalies (Na ₂ O+K ₂ O)	0.5% to 1.5%	
Physical Data (Typical)	Poured	
Maximum Service Temperature	2600°F (1425°C)	
Material Required	125 lb/ft ³ (2.00 g/cm ³)	
Bulk Density	lb/ft³ (g/cm³)	
After 220°F (105°C)	128 to 135 (2.05 to 2.16)	
After 1500°F (815°C)	121 to 128 (1.94 to 2.05)	
Modulus of Rupture	lb/in.² (MPa)	
After 220°F (105°C)	700 to 1,200 (4.8 to 8.3)	
After 1500°F (815°C)	300 to 650 (2.1 to 4.5)	
After 2000°F (1095°C)	250 to 500 (1.7 to 3.4)	
Cold Crushing Strength	lb/in.² (MPa)	
After 220°F (105°C)	2,900 to 4,900 (20.0 to 33.8)	
After 1500°F (815°C)	1,600 to 3,000 (11.0 to 20.7)	
After 2000°F (1095°C)	1,400 to 2,800 (9.7 to 19.3)	
Permanent Linear Change		
After 220°F (105°C)	None	
After 1500°F (815°C)	0% to -0.3%	
After 2000°F (1095°C)	0% to -0.5%	
After 2500°F (1370°C)	-0.3% to +1.5%	
Thermal Conductivity	Btu∍in/hr∍ft²∍°F (W/m∍°C)	
At 400°F (205°C)	6.4 (0.92)	
At 800°F (425°C)	6.4 (0.92)	
At 1200°F (650°C)	6.4 (0.92)	
At 1600°F (870°C) 6.5 (0.94)		
At 2000°F (1095°C) 6.6 (0.95)		
At 2400°F (1315°C)	6.8 (0.98)	

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/Pouring (Weight 12.8%)			
Pounds	7.0	128.0	192.0
Gallons	0.8	15.4	23.0
Liters	3.2	58.0	87.0
For detailed mixing and using instructions, contact your HWI representation	ve or visit www.thinkHWI.	com.	
Working Time	20 minutes		
Heatup/Dryout Schedule			
See HWI Dryout Schedule 2—PLUS Rated Castables and Gunning Casta	ables.		
Installation Guidelines			
See HWI Installation Guidelines CC-1—Conventional Castables—Standa	rd.		
Shelf Life (Under Proper Storage Conditions)		365 days	