THERMBOND® REFRACTORIES

TECHNICAL DATA SHEET

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FORMULA 22-B

Thermbond Refractories use the patented Stellar Binder System™ for easy and accurate mixing, controlled setting, fast dry-out and heat up, thermal shock resistance and other unique properties. Thermbond chemically bonds to existing fired refractories. CHARACTERISTICS: - Alumina - Andalusite - Dense - Non-Wetting - Thermal Shock Resistant - Fast Setting - Fast Curing

PRELIMINARY DATA

PACKAGING		
Unit Equivalent	Bags: 1	Jugs: 1
Bag Weight*	68 lbs	30.8 kg
Jug Weight*	8 lbs	3.6 kg
Drum Weight*	400 lbs	181.4 kg
Unit Weight*	76 lbs	34.3 kg
Yield / Unit*	0.44 ft3	0.013 m3
Units / Ton*	26.46 short	29.16 metric
Board Feet / Unit*	5.3 bd ft	
Wet to Dry Ratio*	12% - 13.2%	
Liquid Activator	FORMULA	
Bags Per Pallet	48	
Drums Per Dry Pallet	1	

APPLICATION	
Data based on	Casting

BULK DENSITY**		
As Placed	170 lbs/ft3	2723 kg/m3
After 1500F (816C)	160 lbs/ft3	2563 kg/m3

MAXIMUM RECOMMENDED SERVICE TEMP**		
Hot Face	3000 F	1649 C

COMPRESSIVE STRENGTH**			
1500F (816C)	2500 psi	176 kg/cm2	17 N/mm2
2000F (1093C)	3500 psi	246 kg/cm2	24 N/mm2
2700F (1482C)	8000 psi	562 kg/cm2	55 N/mm2

PERMANENT LINEAR CHANGE**	
1500F (816C)	-0.10%
2000F (1093C)	-0.10%
2500F (1371C)	-0.30%

TYPICAL CHEMICAL ANALYSIS (After 1500F (816C))**	
Al2O3	67.60%
SiO2	24.16%
Fe2O3	0.57%
P2O5	4.03%
Other	3.65%
Total	100.00%

THERMAL CONDUCTIVITY**		
600F (316C)	15.7 Btu-in/hr-ft2-F	2.26 W/m K
1200F (649C)	14.4 Btu-in/hr-ft2-F	2.08 W/m K
1800F (982C)	14.0 Btu-in/hr-ft2-F	2.02 W/m K
2300F (1260C)	18.6 Btu-in/hr-ft2-F	2.69 W/m K

COLD MODULUS OF RUPTURE**			
1500F (816C)	900 psi	63 kg/cm2	6 N/mm2
2000F (1093C)	1500 psi	105 kg/cm2	10 N/mm2
2500F (1371C)	2200 psi	155 kg/cm2	15 N/mm2

HOT MODULUS OF RUPTURE**			
1500F (816C)	1100 psi	77 kg/cm2	8 N/mm2

*Measures are approximate and may vary. For mixing partial units, contact Stellar Materials for specific wet-to-dry ratios. See Installation Guide for more detailed information.

**Test data shown are based on averages subject to normal variation on individual tests, and therefore should not be assumed to be maximum or minimum specifications.

Due to the unique nature of the Stellar binder system, test procedures vary slightly from ASTM. Documentation of these variations is available upon request.