



www.thermbond.com

USA:(561) 330-9300

STELLAR MATERIALS INCORPORATED

EU:+31 (10) 2460264

ENGLISH

Revision 03/31/2009 (Check www.thermbond.com for updates)

FORMULA 6-AL

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 - Silica - Mullite - Dense - Abrasion Resistant - Non-Wetting - Fast Setting - Fast Curing - Longer Working Time

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* | 0.49 ft ³ | 0.014 m ³ |
| Units / Ton* | 26.46 short | 29.16 metric |
| Board Feet / Unit* | 5.9 bd ft | |
| Wet to Dry Ratio* | 11.2% - 12.3% | |
| Liquid Activator | FORMULA | |
| Bags Per Pallet | 48 | |
| Drums Per Dry Pallet | 1 | |

| APPLICATION | |
|---------------|---------|
| Data based on | Casting |

| BULK DENSITY** | | |
|--------------------|-------------------------|------------------------|
| As Placed | 154 lbs/ft ³ | 2467 kg/m ³ |
| After 1500F (816C) | 147 lbs/ft ³ | 2355 kg/m ³ |

| MAXIMUM RECOMMENDED SERVICE TEMP** | | |
|------------------------------------|--------|--------|
| Hot Face | 2700 F | 1482 C |

| ABRASION RESISTANCE** (ASTM C-704) | |
|------------------------------------|-------------|
| After 1500F (816C) | <12 cc loss |

| MOLTEN METAL CONTACT | |
|--------------------------|--|
| - Aluminum - Zinc - Iron | |

| COMPRESSIVE STRENGTH** | | | |
|------------------------|----------|------------------------|----------------------|
| 1500F (816C) | 8000 psi | 562 kg/cm ² | 55 N/mm ² |
| 2500F (1371C) | 8000 psi | 562 kg/cm ² | 55 N/mm ² |

| PERMANENT LINEAR CHANGE** | |
|---------------------------|--------|
| 1500F (816C) | -0.20% |

| TYPICAL CHEMICAL ANALYSIS (After 1500F (816C))** | |
|--|---------|
| Al ₂ O ₃ | 64.48% |
| SiO ₂ | 24.37% |
| Fe ₂ O ₃ | 0.86% |
| P ₂ O ₅ | 6.04% |
| Other | 4.25% |
| Total | 100.00% |

| THERMAL CONDUCTIVITY** | | |
|------------------------|-----------------------------------|------------|
| 600F (316C) | 10.3 Btu-in/hr-ft ² -F | 1.48 W/m K |
| 1200F (649C) | 9.9 Btu-in/hr-ft ² -F | 1.43 W/m K |
| 1800F (982C) | 10.0 Btu-in/hr-ft ² -F | 1.44 W/m K |
| 2400F (1316C) | 10.6 Btu-in/hr-ft ² -F | 1.52 W/m K |

| COLD MODULUS OF RUPTURE** | | | |
|---------------------------|----------|------------------------|----------------------|
| 1500F (816C) | 1500 psi | 105 kg/cm ² | 10 N/mm ² |
| 2500F (1371C) | 1500 psi | 105 kg/cm ² | 10 N/mm ² |

*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.