



# PRODUCT DATA

**Brand Name:** **HI-STRENGTH™ 25**

**Description:** HI-STRENGTH™ 25 is a very cost-effective, high duty refractory castable designed to resist abrasion and erosion at moderate temperatures. It has excellent thermal shock resistance and is widely used as a refractory lining and maintenance material for many different applications.

Physical properties shown are average values of samples taken under controlled conditions  
ASTM test methods used where applicable

**Maximum Service Temperature: 2500°F (1371°C)**

**Dry Material Required per Cubic Foot :** 124 - 130 lbs. (approximate)

**Typical Water Required for Mixing (by weight) :**  
Vibration Cast ..... 11 - 14%

<u>Bulk Density (pcf)</u>	<u>Vibration Cast Data</u>	
After 220°F (104°C)	129 - 139	(2.07 - 2.23 g/cm <sup>3</sup> )
After 1500°F (815°C)	124 - 130	(1.99 - 2.08 g/cm <sup>3</sup> )
After 2000°F (1093°C)	123 - 129	(1.97 - 2.07 g/cm <sup>3</sup> )

<u>Cold Crushing Strength (psi)</u>		
After 220°F (104°C)	6000 - 12000	(420 - 820 kg/cm <sup>2</sup> )
After 1500°F (815°C)	1600 - 2200	(112 - 154 kg/cm <sup>2</sup> )
After 2000°F (1093°C)	1500 - 2100	(105 - 147 kg/cm <sup>2</sup> )

<u>Modulus of Rupture (psi)</u>		
After 220°F (104°C)	800 - 1300	(56 - 91 kg/cm <sup>2</sup> )
After 2000°F (1093°C)	300 - 700	(21 - 49 kg/cm <sup>2</sup> )

<u>Permanent Linear Change (%)</u>		
After 1500°F (815°C)	-0.2 to +0.2	
After 2000°F (1093°C)	-0.4 to 0.0	

<u>Thermal Conductivity (K Factor)</u>	<u>BTU/ft<sup>2</sup>/hr./°F/inch</u>	<u>W/mK</u>
Mean Temperature		
After 1500°F (815°C)	7.1	1.02
After 2000°F (1093°C)	8.0	1.15

<u>Typical Chemical Analysis (%)</u>		
(Calcined Basis)		
Alumina (Al <sub>2</sub> O <sub>3</sub> ) .....	43.5	
Silica (SiO <sub>2</sub> ) .....	40.8	
Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> ) .....	2.5	
Titania (TiO <sub>2</sub> ) .....	2.0	
Lime (CaO) .....	9.5	
Magnesia (MgO) .....	0.6	
Alkalis (Na <sub>2</sub> O+K <sub>2</sub> O) .....	1.1	

**Standard Packaging:** 55 lb bag. 72 bags per pallet. Bulk packaging available.  
**Brand Code:** 0907

The properties shown on this data sheet represent typical average results using standard ASTM test methods (unless otherwise noted) conducted under controlled condition (using standard rectangular shapes), and should not be considered to be guaranteed specifications. Properties are subject to normal manufacturing statistical standard deviation ranges, and Resco Products, Inc. reserves the right to modify the properties and specifications at any time without prior notice.

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