



# PRODUCT DATA

**Brand Name:**

## HI-STRENGTH™ 28-LI

**Description:** HI-STRENGTH™ 28-LI produces a tough, monolithic structure with negligible shrinkage. It has good refractoriness with a 2800°F use limit. A casting or ramming consistency may be obtained by control of water during mixing.

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

**Maximum Service Temperature: 2800°F (1538°C)**

**Typical Water Required for Mixing (by weight) :**

Vibration Cast ..... 9 - 12%

### Bulk Density (pcf)

	Vibration Cast Data	
After 220°F (104°C)	131 - 140	(2.10 - 2.24 g/cm <sup>3</sup> )
After 2000°F (1093°C)	125 - 134	(2.00 - 2.15 g/cm <sup>3</sup> )
After 2732°F (1500°C)	117 - 126	(1.87 - 2.02 g/cm <sup>3</sup> )

### Cold Crushing Strength (psi)

After 220°F (104°C)	4000 - 6500	(280 - 455 kg/cm <sup>2</sup> )
After 2000°F (1093°C)	1500 - 2500	(105 - 175 kg/cm <sup>2</sup> )
After 2732°F (1500°C)	8000 - 12000	(560 - 840 kg/cm <sup>2</sup> )

### Modulus of Rupture (psi)

After 220°F (104°C)	800 - 1400	(56 - 98 kg/cm <sup>2</sup> )
After 2000°F (1093°C)	400 - 700	(28 - 49 kg/cm <sup>2</sup> )
After 2732°F (1500°C)	2000 - 3000	(140 - 210 kg/cm <sup>2</sup> )

### Permanent Linear Change (%)

After 1500°F (815°C)	-0.2 to +0.2
After 2732°F (1500°C)	+1.0 to +2.0

### Thermal Conductivity (K Factor)

Mean Temperature	BTU/ft <sup>2</sup> /hr./°F/inch	W/mK
1500°F (815°C)	8.1	1.17
2500°F (1371°C)	9.5	1.37

### Typical Chemical Analysis (%)

(Calcined Basis)

Alumina (Al <sub>2</sub> O <sub>3</sub> ) .....	45.6
Silica (SiO <sub>2</sub> ) .....	44.2
Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> ) .....	1.3
Titania (TiO <sub>2</sub> ) .....	2.1
Lime (CaO) .....	5.6
Magnesia (MgO) .....	0.3
Alkalis (Na <sub>2</sub> O+K <sub>2</sub> O) .....	0.9

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

Brand Code: 0911

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.

RESCO PRODUCTS disclaims any express or implied warranties based on this sheet.

02/06/17 is the date that this data sheet was updated. Check with your RESCO sales representative or RESCO website to determine you have the current sheet.

One Robinson Plaza - Suite 300, 6600 Steubenville Pike, Pittsburgh, PA, 15205 Phone: 888-283-5505