



# Technical Data

8/03: 5465  
Plus: 5469

## GREENLITE® -45-L

### Technical Data

<u>Physical Data: (Typical)</u>	English Units	<u>Poured</u>	SI Units
Maximum Recommended Temperature	2500°F		1370°C
Material Required	<u>lb/ft<sup>3</sup></u> 71		<u>g/cm<sup>3</sup></u> 1.14
Bulk Density			
220°F (105°C)	77		1.23
1500°F (815°C)	71		1.14
Water Required		<u>Approximately</u>	
Weight % Dry Solids		26	
Per 100 Pounds (45.4 kg)	3 1/8 gal (U.S.)		11.8 liters
Working Time		30 minutes	
Modulus of Rupture	<u>lb/in<sup>2</sup></u>		<u>MPa</u>
220°F (105°C)	550		3.8
1500°F (815°C)	360		2.5
2000°F (1095°C)	420		2.9
Cold Crushing Strength			
220°F (105°C)	3100		21.4
1500°F (815°C)	2000		13.8
2000°F (1095°C)	2100		14.5
Permanent Linear Change			
220°F (105°C)		Nil	
1500°F (815°C)		0.2% shr.	
2000°F (1095°C)		0.5% shr.	
2400°F (1315°C)		1.5% shr.	
Thermal Conductivity			
At a Mean Temperature of	<u>Btu-in/hr-ft<sup>2</sup>-°F</u>		<u>W/m-°C</u>
400°F (205°C)	2.7		0.39
800°F (425°C)	2.6		0.37
1100°F (595°C)	2.6		0.37
1000°F (540°C) Cooled from 1100°F mean	2.5		0.36
800°F (650°C) Cooled from 1100°F mean	2.5		0.36
Particle Size			
Retained on 10 Mesh Tyler Screen		Less than 1%	

Note: GREENLITE-45-L Plus will typically show 1-2 lb/ft<sup>3</sup> lower density and up to 10% lower strength values.

### Chemical Analysis, % Approximate

(Calcined Basis)

Silica	(SiO <sub>2</sub> )	39.8
Alumina	(Al <sub>2</sub> O <sub>3</sub> )	44.7
Titania	(TiO <sub>2</sub> )	2.2
Iron Oxide	(Fe <sub>2</sub> O <sub>3</sub> )	1.2
Lime	(CaO)	11.0
Magnesia	(MgO)	0.3
Alkalies	(Na <sub>2</sub> O+K <sub>2</sub> O)	0.8

The test data shown are based on average results on production samples and are subject to normal variation on individual tests. Accordingly, test data cannot be taken as establishing maximum or minimum specifications. ASTM test procedures used when applicable.

(Continued)



# Technical Data

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## GREENLITE<sup>®</sup> -45-L (Continued)

Description: 2500°F Insulating Casting Grade Castable

Features: **GREENLITE-45-L** is a 2500°F casting grade, insulating castable exhibiting high strength in conjunction with low density. It can be pumped with a Putzmeister pneumatic pump. **GREENLITE-45-L Plus** is the fast fire version of **GREENLITE-45-L**.

Uses: Typical applications are backup linings in reheat furnace floors, annealing furnace cartops, fired oil heater stacks, carbon monoxide boiler duct linings, olefins cracking furnace stacks, boilers, and incinerator backup linings.

3/01/93 Dev.