

GREENLITE®-45-L PLUS



Product Data

12/15: 5469

Description: 2500°F (1370°C) Insulating Castable

Features: • Contains GREENLITE® AGGREGATE, which imparts extraordinary strength and features excellent insulating properties.

- Uses:
- Backup linings in reheat furnace floors and annealing furnace cartops.
 - Fired oil heater stacks.
 - Carbon monoxide boiler duct linings.
 - Olefins cracking furnace stacks.
 - Boilers and incinerator backup linings.

Chemical Analysis: Approximate (Calcined Basis)

Silica (SiO ₂)	39.3%
Alumina (Al ₂ O ₃)	44.6%
Iron Oxide (Fe ₂ O ₃)	1.3%
Titania (TiO ₂)	1.9%
Lime (CaO)	11.8%
Magnesia (MgO)	0.4%
Alkalies (Na ₂ O+K ₂ O)	0.7%

Physical Data (Typical)

Conventional Cast/Poured

Maximum Service Temperature	2500°F (1370°C)
Material Required	73 lb/ft ³ (1.17 g/cm ³)
Bulk Density	lb/ft ³ (g/cm ³)
After 220°F (105°C)	75 to 85 (1.20 to 1.36)
After 1500°F (815°C)	68 to 78 (1.09 to 1.25)
Modulus of Rupture	lb/in. ² (MPa)
After 220°F (105°C)	580 (4.0)
After 1500°F (815°C)	380 (2.6)
After 2000°F (1093°C)	450 (3.1)
After 2400°F (1316°C)	700 (4.8)
Cold Crushing Strength	lb/in. ² (MPa)
After 220°F (105°C)	1,800 to 2,800 (12.4 to 19.3)
After 1500°F (815°C)	2,300 to 4,000 (15.9 to 27.6)
After 2000°F (1093°C)	1,700 (11.7)
After 2400°F (1316°C)	1,300 (9.0)
Permanent Linear Change	
After 220°F (105°C)	None
After 1500°F (815°C)	0.0 to -0.3%
After 2000°F (1093°C)	-0.4%
After 2400°F (1315°C)	-0.8%
Thermal Conductivity	Btu·in/hr·ft ² ·°F (W/m·°C)
At 400°F (205°C)	2.8 (0.40)
At 800°F (425°C)	2.4 (0.35)
At 1200°F (649°C)	2.6 (0.37)
At 1600°F (871°C)	2.9 (0.42)
AT 2000°F (1093°C)	3.3 (0.48)
Particle Size Maximum Grain Size 10 Mesh (Tyler)	Less than 1%

Product Data

Note: The test data shown are based on average results on production samples and are subject to normal variation on individual tests. The test data cannot be taken as minimum or maximum values for specification purposes. ASTM test procedures used when applicable.

Mixing and Using Information (Water calculated at 8.337 lb/gallon)	55 lb bag	1000 lb bag	1500 lb bag
Water Required—Hand Casting/Pouring (Weight 25.0%)			
Pounds	13.8	250.0	375.0
Gallons	1.6	30.0	45.0
Liters	6.2	113.3	169.9

For detailed mixing and using instructions, contact your HWI representative or visit www.thinkHWI.com.

Heatup/Dryout Schedule

See HWI Dryout Schedule 4—PLUS Rated Lightweight Castables and Gunning Castables.

Installation Guidelines

See HWI Installation Guidelines IC-1—Insulating Castables—Standard.

Shelf Life (Under Proper Storage Conditions)	365 days
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