

CERAMITE TD GUNITE

BAUXITE AND SILICON CARBIDE BASED DRY SPRAYABLE REFRACTORY

Ceramite® TD Gunitite is a bauxite and silicon carbide blend sprayable refractory. The formulation aggregates have a 3 millimetre (0.12 inch) maximum grain size, and the fully cured material has a 1000°C (1832°F) maximum service temperature.

Ceramite TD Gunitite can be applied on-site and works well for patching or applications where fast installation is important. It sets quickly after spraying and has high abrasion resistance.

BENEFITS

- Adheres to most surfaces
- Fast setting
- High wear and temperature resistance
- Quick installation
- Applied with standard spraying equipment
- Very low rebound rates

APPLICATIONS

- Chutes
- Ducts
- Hoppers
- Wall linings
- Cyclones
- Raw mills
- Ball mills
- Thimbles

USE INSTRUCTIONS

Ceramite TD Gunitite is installed using a dry spraying process. This process consists of compressed air propelling dry refractory, through a hose, to the spray machine's high-pressure nozzle. The dry refractory aggregate is moistened at the spray nozzle with an appropriate amount of water and ejected from the sprayer onto the work surface.

1. Ensure the refractory temperature is 20 ±5°C (68±10°F). NOTE: It may take up to two days to stabilize the refractory temperature, depending on storage.
2. The water mixed with the refractory should be 20°C (68°F).
3. Use a gunitite rotary gun, and apply Ceramite TD Gunitite with a nozzle. The water addition rate should be 15 percent of the Ceramite TD Gunitite weight.
4. Position the nozzle no more than 1.2 metres (3.9 feet) from the work surface.



5. Keep the spray nozzle angled 90 degrees from the work surface.
6. Spray Ceramite TD Gunitite evenly and thoroughly to the desired thickness.
7. When the application is complete cover exposed surfaces to minimize water evaporation and promote hardness.
8. Let Ceramite TD Gunitite set for a minimum of 24 hours at 20°C (68°F). Increase the set time for lower temperatures.
9. Refractory firing is recommended after hardening. Follow the hardening and firing instructions provided in Pyrotek datasheet [Ceramite Guidelines For Use](#) (Part Number 1463).

AVAILABILITY

- 25 kg (55 lb) small bags
- Various other larger bags

STORAGE

- Store in dry and frost-free conditions, off the ground in closed bags.
- Store at 15–25°C (59–77°F) for at least two days before use
- Fired, cast Ceramite parts for hot applications must not be exposed to water or moisture. If exposed, a full sequence of preheating must be performed
- Six month shelf life with proper storage

HEALTH AND SAFETY

Prior to use, refer to the product safety data sheet for proper handling and required personal protective equipment.



PHYSICAL PROPERTIES

Property	Value
Density—kg/m ³ (lb/ft ³) at 20°C (68°F) at 600°C (1112°F)	2500 (156) 2400 (150)
Cold Flexural Strength—MPa (psi) at 20°C (68°F) at 600°C (1112°F) at 850°C (1562°F)	10 (1450) 10 (1450) 6 (870)
Cold Compressive Strength—MPa (psi) at 20°C (68°F) at 600°C (1112°F) at 1000°C (1832°F)	50 (7300) 70 (10,200) 35 (5100)
Abrasion*—cm ³ (in ³) at 20°C (68°F) at 600°C (1112°F)	1.5 (0.090) 2.1 (0.13)
Thermal Conductivity—W/m·K (BTU-in/ft ² ·hr·°F) at 300°C (572°F) at 600°C (1112°F) at 900°C (1652°F)	1.7 (11.8) 1.6 (11.1) 1.6 (11.1)
Linear Thermal Expansion at 20–850°C (68–1562°F)	0.5%
Permanent Linear Change at 20–850°C (68–1562°F)	-0.44%
Maximum Service Temperature	1000°C (1832°F)
Maximum Grain Size—mm (in)	3 (0.12)
Rebound Rate	8%
Listed applications are suggested uses only. * The abrasion test was performed per the DIN 52108 standard and pre-fired at the indicated temperature.	

