CERAMITE TW WET SPRAY

BAUXITE AND SILICON CARBIDE-BASED WET SPRAYABLE REFRACTORY

Ceramite® TW Wet Spray is a sprayable refractory which is applied on-site, and works well for patching or applications where installation speed is important. After being sprayed it sets quickly and has high abrasion resistance during use.

The Ceramite TW Wet Spray formula is based on a blend of bauxite and silicon carbide. The fully cured material supports a maximum service temperature up to 1000°C (1832°F).

COMPOSITION

Material	Approximate Percentage of Weight
Al_2O_3	63%
SiC	18%
SiO_2	8%
CaO	7%
Fe_2O_3	1%

BENEFITS

- Adheres to most surfaces
- Fast setting
- High wear and temperature resistance
- Quick installation
- Installed with standard wet shotcrete equipment
- Low rebound rates

APPLICATIONS

- Chutes
- Ducts
- Hoppers
- Wall linings

AVAILABILITY

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

PHYSICAL PROPERTIES

Property	Value
Density–kg/m³ (lb/ft³) at 20°C (68°F) at 600°C (1112°F)	 2600 (160) 2600 (160)
Cold Flexural Strength–MPa (psi) at 20°C (68°F) at 600°C (1112°F) at 850°C (1562°F)	 16 (2300) 17 (2500) 10 (1500)
Cold Compressive Strength–MPa (psi) at 20°C (68°F) at 600°C (1112°F) at 1000°C (1832°F)	 109 (15,800) 153 (22,200) 95 (13,800)
Abrasion*–cm³ (in³) at 20°C (68°F) at 600°C (1112°F)	 1.3 (0.079) 1.1 (0.067)
Thermal Conductivity– W/m·K (BTU·in/ft²·hr·°F) at 300°C (572°F) at 600°C (1112°F) at 900°C (1652°F)	 1.4 (9.7) 1.1 (7.6) 1.1 (7.6)
Linear Thermal Expansion at 20–850°C (68–1562°F)	0.6%
Permanent Linear Change at 20–850°C (68–1562°F)	-0.37%
Maximum Service Temperature	1000°C (1832°F)
Maximum Grain Size–mm (in)	3 (0.12)

* The abrasion test was performed per the DIN 52108 standard and pre-fired at the indicated temperature.

Pyrotek

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USE INSTRUCTIONS

1. Preliminary preparation:
   - Ensure the refractory is between 15–25°C (59–77°F). **NOTE: Depending on storage conditions it may take up to two days to stabilize the refractory temperature**
   - If polypropylene fibres are being added to the refractory, they must be added to the dry castable before the addition of any water. Mix the fibres and castable thoroughly for at least one minute prior to adding water
   - Ensure potable water that is below 25°C (77°F) is being used
   - Mix the material with a pan mixer
2. Add the dry Ceramite TW Wet Spray to the hopper.
3. Add water that is 5.5–6.0 percent of the total weight of the Ceramite TW Wet Spray material.
4. Mix the refractory and water for a minimum of six minutes, or longer until they are thoroughly blended. **NOTE: If sprayable fibre-reinforcement is required, add the fibres toward the end of the mixing cycle.**
5. Spray Ceramite TW Wet Spray evenly on the surface until the required thickness is achieved.
   - The nozzle should be angled at 90 degrees to, and no more than 1.2 metres (4 feet) from the work surface.
6. When the application is complete, cover exposed surfaces to minimize the evaporation of water and to promote hardening.
7. Allow the applied material to set for a minimum of 24 hours at room temperature, 20°C (68°F). Increase the set time for lower temperatures.
8. Refractory firing is recommended after the set time for hardening is complete. Follow the hardening and firing instructions provided in the Ceramite Guidelines for Use datasheet (Pyrotek Document Number 1463).

STORAGE

- Ceramite mortar should be stored in dry and frost-free conditions, off the ground in closed bags. With proper storage it will retain its properties for at least six months
- Ceramite mortar should be stored at room temperature of 15–25°C (59–77°F) for at least two days prior to use
- Fired Ceramite parts for hot applications must not be exposed to water or moisture. If exposed to water or moisture, a full sequence of preheating must be performed

HEALTH AND SAFETY

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

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