

# KAST-O-LITE<sup>®</sup> 23 ES PLUS

## Product Data

Ref:227/16/12/13

**Description:** 1260°C Intermediate Strength Insulating Castable.

- Features:**
- Combines good strength with high insulating value.
  - Excellent volume stability.
  - May be cast or gunned in place.
  - Suitable for hot face or back-up linings.

- Uses:**
- Reheating furnace subhearth.
  - Forging furnace doors and roofs.
  - Fluid coker and drums for incinerators.
  - Rotary kiln feed end housing.
  - Process furnace heaters.
  - Fluid catalytic cracking unit walls.
  - Crude heaters.

### Chemical Analysis: Approximate (Calcined Basis)

Silica - SiO <sub>2</sub>	34.3%
Alumina - Al <sub>2</sub> O <sub>3</sub>	34.4%
Titania - TiO <sub>2</sub>	1.3%
Iron Oxide - Fe <sub>2</sub> O <sub>3</sub>	10.7%
Lime - CaO	16.0%
Magnesia - MgO	1.1%
Alkalies - Na <sub>2</sub> O + K <sub>2</sub> O	2.3%

### Physical Properties

	Conventional Cast
Maximum Recommended Temperature	1260°C
Quantity Required	1230 Kgs/m <sup>3</sup>
Water required for mixing per 100 Kgs	28 Litres Approximately
Bulk Density	Kgs/m <sup>3</sup>
After Heating at 105°C	1250 - 1400
After Heating at 815°C	1210 - 1270
Modulus of Rupture - ASTM C133 and C865	MPa
After Heating at 105°C	2.0 - 5.0
After Heating at 815°C	1.0 - 4.0
After Heating at 1095°C	1.0 - 4.0
Cold Crushing Strength - ASTM C133 and C865	MPa
After Heating at 105°C	6.0 - 12.0
After Heating at 815°C	6.0 - 12.0
After Heating at 1095°C	6.0 - 12.0
Permanent Linear Change - ASTM C113 and C865	
After Heating at 105°C	Negligible
After Heating at 815°C	0.2% Shr
After Heating at 1095°C	0.4% Shr
Thermal Conductivity	W/mK
At 200°C	0.48
At 400°C	0.39
At 600°C	0.38
At 800°C	0.41
At 1100°C	0.52
Shelf Life (Under Proper Storage Conditions)	365 days

Note: The test data shown are based on average results of control tests and are subject to normal variation on individual tests. These results cannot be taken as maximum or minimum requirements for specification purposes.

MSDS, Installation Guidelines and Dry Out Schedules are also available.