

ULTRA-GREEN® 45

Product Data

Ref:58/31/10/12

Description: 45% Alumina, Ultra-Low Cement, Vibrating Castable.

- Features:
- Excellent strength.
 - High density and low porosity.
 - Outstanding hot load bearing ability.
 - Superior corrosion resistance.
- Uses:
- Original lining and repair of existing linings.
 - Pre-cast shapes in a range of iron and steel applications.
 - Non-ferrous furnaces and ladles.
 - Cement kilns, coolers, and rings.
 - Boilers.
 - Chemical processing industry applications.

Chemical Analysis: Approximate (Calcined Basis)

Silica - SiO ₂	46.2%
Alumina - Al ₂ O ₃	49.9%
Titania - TiO ₂	1.1%
Iron Oxide - Fe ₂ O ₃	1.0%
Lime - CaO	1.3%
Magnesia - MgO	0.1%
Alkalies - Na ₂ O + K ₂ O	0.4%

Physical Properties

	Vibration Cast
Maximum Recommended Temperature	1650°C
Quantity Required	2305 Kgs/m ³
Water required for mixing per 100 Kgs	5.0 - 6.0 Litres Approximately
Bulk Density	Kgs/m ³
After Heating at 105°C	2200 - 2370
After Heating at 815°C	2200 - 2370
Modulus of Rupture - ASTM C133 and C865	MPa
After Heating at 105°C	7.0 - 12.0
After Heating at 815°C	9.0 - 16.0
After Heating at 1095°C	9.0 - 16.0
After Heating at 1370°C	7.0 - 15.0
Cold Crushing Strength - ASTM C133 and C865	MPa
After Heating at 105°C	50.0 - 90.0
After Heating at 815°C	70.0 - 90.0
After Heating at 1095°C	70.0 - 90.0
After Heating at 1370°C	55.0 - 70.0
Permanent Linear Change - ASTM C113 and C865	
After Heating at 105°C	<0.05% Shr
After Heating at 815°C	0 - 0.2% Shr
After Heating at 1095°C	0 - 0.6% Shr
After Heating at 1370°C	0 - 0.5% Shr
After Heating at 1600°C	0.8% Shr - 1.4% Exp
Thermal Conductivity	W/mK
At 205°C	0.89
At 425°C	1.05
At 650°C	1.23
At 870°C	1.38
At 1095°C	1.56
At 1315°C	1.72
Shelf Life (Under Proper Storage Conditions)	120 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.