

Product Description

A high alumina, general purpose castable for service temperature up to 1650°C (3000°F). It has a good thermal shock resistance. It is recommended for casting burner blocks, door lining, car tops, crucible furnace linings and special shapes. Its high purity makes it suitable for special furnace atmospheres. A separate gunning version is also available.

Properties	Firecrete 3X
Region of Manufacture	Europe
Bond Type	Hydraulic
Method of application	Cast
Maximum Service Temperature, °C (°F)	1650 (3000)
ASTM C401-91 Classification	E
Estimated weight of dry material/ m ³ of construction, kg (lb)	2170 (135)
Water addition, % by weight	12.5
Maximum grain size, mm	5
Packaging in bags, kg (lb)	25 (55)

Whilst the values and application information in this datasheet are typical, they are given for guidance only. The values and the information given are subject to normal manufacturing variation and may be subject to change without notice. Morgan Advanced Materials – Thermal Ceramics makes no guarantees and gives no warranties about the suitability of a product and you should seek advice to confirm the product's suitability for use with Morgan Advanced Materials - Thermal Ceramics.

Firecrete® 3X

Product Data Sheet



Density, kg/m ³ (pcf), ASTM C134	
oven dried, 110°C (230°F)	2190 (136.7)
after 5 hours firing, 815°C (1500°F)	2150 (134.2)
Cold crushing strength, MPa (psi), ASTM C133	
oven dried, 110°C (230°F)	27.4 (3973)
after 5 hours firing, 815°C (1500°F)	22.4 (3248)
after 5 hours firing, 1000°C (1832°F)	16.7 (2421)
Permanent linear change, %, ASTM C113	
after 5 hours, 815°C (1500°F)	-0.1
after 5 hours, 1600°C (2912°F)	+0.2
Thermal conductivity, W/m·k (BTU·in./hr·ft ² ·°F), ASTM C201/417	
400°C (752°F)	0.94 (6.52)
600°C (1112°F)	0.95 (6.59)
800°C (1472°F)	0.97 (6.73)
1000°C (1832°F)	1.01 (7.01)
Chemical composition, %	
Alumina, Al ₂ O ₃	54.5
Silica, SiO ₂	40.8
Ferric oxide, Fe ₂ O ₃	0.6
Titanium oxide, TiO ₂	1.0
Calcium oxide, CaO	2.9
Alkalis as, MgO+K ₂ O+Na ₂ O	0.5
Ignition Loss	0.2

Storage and Shelf Life

- Should be stored in dry conditions, unopened packaging on pallets. Do not store on ground. Keep out of rain and damp conditions.
- Shelf life is of twelve months with original packaging, double shrink film and dehydrating agent provided if the monolithic is stored under these recommended conditions.

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