

Product Description

A very light insulating concrete, for service up to 1100°C (2010°F), to be installed by casting. It is recommended for applications requiring very low density and thermal conductivity, such as general high temperature backup insulation as radiant and convection section in petrochemical heaters. It conforms to class N ASTM C401-91.

Properties	Firelite 105
Region of Manufacture	Europe
Bond Type	Hydraulic
Method of application	Cast
Maximum Service Temperature, °C (°F)	1100 (2010)
ASTM C401-91 Classification	N
Estimated weight of dry material/ m ³ of construction, kg (lb)	622 (38.8)
Water addition, % by weight	88
Maximum grain size, mm	3
Packaging in bags, kg (lb)	20 (44)

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.

Firelite[®] 105

Product Data Sheet



Density, kg/m ³ (pcf), ASTM C134	
oven dried @ 110°C (230°F)	710 (44.3)
after 5 hours firing @ 815°C (1500°F)	620 (38.7)
Cold crushing strength, MPa (psi), ASTM C133	
oven dried, 110°C (230°C)	2.2 (319)
after 5 hours firing, 815°C (1500°F)	1.6 (232)
Permanent linear change, %, ASTM C113	
after 5 hours firing, 815°C (1500°F)	-0.5
after 5 hours firing, 1000°C (1832°F)	-1.0
Thermal conductivity, W/m•K (BTU•in./hr•ft ² •°F), ASTM C201/417	
200°C (392°F)	0.13 (0.90)
400°C (752°C)	0.15 (1.04)
600°C (1112°F)	0.17 (1.18)
Chemical composition, %	
Alumina, Al ₂ O ₃	38.0
Silica, SiO ₂	22.1
Calcium Oxide, CaO	22.2
Ferric Oxide, Fe ₂ O ₃	10.2
Titanium Oxide, TiO ₂	1.3
Alkali as, MgO+K ₂ O+Na ₂ O	6.2
Ignition Loss	2.2

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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