

Data sheet

ENGLISH

# FireMaster® FireBarrier 135



## Description

**FireMaster® FireBarrier products are cementitious materials designed for a variety of fire protection applications requiring strong and weather resistant exterior finishes.**

FireBarrier 135 is available in two different dry powder versions used for either sprayed or cast application. The dry powder is mixed with water, either in a spray machine for sprayed application, or directly when cast into shapes. The cast version allows linings to be pre-formed when spray application is not convenient or practical.

Consisting of a unique formulation of Morgan Thermal Ceramics refractory technology. FireMaster® FireBarrier when mixed with water can be applied by spray equipment to a variety of substrates.

FireMaster® FireBarrier 135 is suitable for cellulosic and hydrocarbon fires and has been fire tested in high-rise hydrocarbon fires of up to 1350°C (2462°F).

FireMaster® FireBarrier 135 has been successfully fire tested to IMO A 754(18), ISO 834, RABT, Hydrocarbon modified (HCM) and RWS fire curves.

## Features

- 2 versions available: one for sprayed application and one for cast application
- Very low spraying wastage during installation – less than 1% of weight
- Fast and easy to install - one, single layer application
- High adhesion strength - eight times greater than product weight
- High quality surface finish that can be painted
- Refractory product capable of repeated exposure to 1350°C (2462°F).  
Comprehensively fire tested in over 11 fire tests for fire protection of tunnels EU MED approved A60 steel floating floor system

## Applications

- Tunnel fire protection (concrete linings, escape refuges, ventilation shafts)
- A60 floating floors in ships

**FIREMASTER®**

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## FireMaster® FireBarrier 135

## General properties

	Standard	Cast
Temperature limit, °C	1350	1350
Weight of dry material/m <sup>3</sup> required of construction, kg	1050	1210
Installed density, kg/m <sup>3</sup>	1550	-
Long term density, kg/m <sup>3</sup>	1180	1235
Dry density, kg/m <sup>3</sup>	1100	1065
Cold crushing strength ASTM C-133 (after 3 days curing), MPa	3.0	5.4
Cold crushing strength ASTM C-133 (after 3 days curing + drying), MPa	4.0	4.2
Water to mix, %	50	38-40

## Fire protection properties

- Class A1 Reaction to Fire in accordance with EN 13501-1 : 2002
- CSI Registration No. 0202/04
- Non combustible material According to IMO RES. A.799 (19) IMO RES. MSC61 (67)-FTP code, IMO MSC/Circ.1120
- MED B 520509CS

## Physical properties

Adhesion strength ASTM E-736/06, KPa	: on steel surface	>49.5
	: on concrete surface	>45.1
Modulus of elasticity, MPa	: after setting	4.05
	: after 28 days	4.05

## High temperature performances

Thermal conductivity (ISO 8302 : 1991) at mean temperature of :		
	W/m.K : 50°C	0.267
	W/m.K : 200°C	0.194
	W/m.K : 500°C	0.169
Specific Heat (EN 821-2) :		
	J/kg.K : 50°C	704
	J/kg.K : 100°C	806
	J/kg.K : 200°C	678
Chemical Composition :		
	% : SiO <sub>2</sub>	28.2
	% : Al <sub>2</sub> O <sub>3</sub>	43.5
	% : CaO Total	24.4
	% : Fe <sub>2</sub> O <sub>3</sub>	1.5
	% : TiO <sub>2</sub>	0.8
	% : MgO + K <sub>2</sub> O + Na <sub>2</sub> O <sub>3</sub>	1.6

## Availability and packaging

In bags of 25kg weight supplied to site and ready to mix with water. Also available in large 1000kg bags supplied shrink-wrapped on pallets. Pallet dimensions 1390mm x 1090mm x 1000mm. Gross weight of pallet 1030kg.

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**SUPERWOOL®** is a patented technology for high temperature insulation wools which have been developed to have a low bio persistence (information upon request). **SUPERWOOL®** products may be covered by one or more of the following patents, or their foreign equivalents:

**SUPERWOOL® PLUS** and **SUPERWOOL® HT** products are covered by patent numbers: US5714421 and US7470641, US7651965, US7875566, EP1544177 and EP1725503 respectively.

A list of foreign patent numbers is available upon request to Morgan Advanced Materials plc.

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