

FireMaster® Marine Plus Blanket



Datasheet Code US: 7-14-106

MSDS Code US: 406

© 2009 Morgan Thermal Ceramics, a business within the Morgan Ceramics Division of The Morgan Crucible Company plc



Product Description

Manufactured from FireMaster 607® fiber, FireMaster Marine Plus Blanket is a highly insulating blanket especially developed for fire protection applications that are space or weight sensitive.

Using an advanced fiber production technology developed by Thermal Ceramics, insulation performance of the blanket is optimized. Compared to standard FireMaster blanket, systems using FireMaster Marine Plus Blanket require either less thickness or lower density specifications to meet the same fire ratings, resulting in typical savings of 20% to 30% in applied weight.

The advanced production technology used in the manufacture of FireMaster Marine Plus Blanket ensures that even low density blankets have high handling strength, allowing easy and convenient installation. No binder is used during manufacture therefore no smoke will be emitted in a fire. FireMaster Marine Plus Blanket is non-combustible, very flexible, easily cut and simple to install.

FireMaster Marine Plus Blanket is exonerated from carcinogen classification under Nota Q of the European Union Directive 97/69/EC.

FireMaster Marine Plus Blanket has been comprehensively tested and approved for the fire protection of steel, aluminium and composite structures used in the marine industry and offers substantial weight savings over traditionally used fiber insulation systems. It is also suitable for use where high insulation performance in fires is required in the offshore, petrochemical and construction industries.

A wide range of thickness and densities are available and the blanket can be supplied with aluminium foil or glass cloth facings on request.

IMPORTANT NOTICE

FireMaster Marine Plus Blanket is specially manufactured to provide optimum insulation performance at high temperature. Its thermal conductivity is uniquely lower than standard blankets made by Thermal Ceramics. FireMaster Marine Plus Blanket cannot be automatically substituted with standard FireMaster 607 or other Superwool® products. Specific fire testing of an identical system specification must be carried out to prove equivalent performance.

Thickness Range

25 to 50 mm (1 to 2 in.)

Density Range

64 to 128 kg/m³ (4 to 8 pcf)

Thermal Insulation at Ambient Temperatures

The following R value figures may be used for all densities of FireMaster Marine Plus Blanket

Thickness of blanket, mm(in.)	R value, mK/W
25 (0.98)	0.78 (4.41)
30 (1.18)	0.94 (5.30)
35 (1.37)	1.09 (6.2)
40 (1.57)	1.25 (7.1)
50 (1.97)	1.56 (8.9)

Basis

Thermal conductivity of FireMaster Marine Plus Blanket 64 kg/m³ (4 pcf) measured at 10°C (50°F) to BS EN 12667 method = 0.0319 W/m•K (0.22 BTU•in/hr•ft²•F°)

Thermal Conductivity at High Temperature

Thermal Conductivity, w/m•K (BTU•in/hr•ft²•F°) at mean temperature

Density	200°C (392°F)	400°C (752°F)	600°C (1112°F)	800°C (1472°F)	1000°C (1832°F)
64 kg/m ³ (4 pcf)	0.06 (0.42)	0.10 (0.69)	0.17 (1.18)	0.26 (1.80)	0.38 (2.64)
96 kg/m ³ (6 pcf)	0.05 (0.35)	0.09 (0.62)	0.14 (0.98)	0.21 (1.46)	0.29 (2.01)
128 kg/m ³ (8 pcf)	0.04 (0.28)	0.08 (0.56)	0.12 (0.83)	0.18 (1.25)	0.25 (1.73)

FireMaster® Marine Plus Blanket



Acoustic Insulation Performance Sound Absorption Testing

Test Method: BS EN ISO 354:2003
FireMaster Marine Plus Blanket 45mm x 64 kg/m³
(1.77in. x 4 pcf)

		Frequency						
		125	250	500	1000	2000	4000	Overall
Class "A"	Non-Faced blanket	0.15	0.75	1.00	1.00	1.00	0.75	1.00
Class "C"	Faced with 20µm (0.8 mil) reinforced aluminum foil	0.40	0.90	0.95	0.85	0.80	0.65	0.80
Class "B"	Faced with glass cloth	0.45	0.90	0.75	0.65	0.65	0.45	0.65

Sound Transmission Testing

FireMaster Marine Plus Blanket 45mm (1.77in) attached to 5mm (0.2in) steel substrate

	Hz	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	Avg.
64 kg/m ³ (4 pcf)	dB	29.2	26.0	28.6	28.4	30.4	36.9	40.7	44.6	48.5	52.2	56.0	59.0	60.9	62.0	57.6	58.3	61.8	64.5	45
128 kg/m ³ (8 pcf)	dB	28.0	25.5	28.8	29.1	31.8	39.0	43.9	48.0	51.5	55.8	60.3	62.5	63.8	64.5	60.4	62.1	65.0	66.5	46

Reduction in Transmitted Noise (dB) at Varying Frequency (Hz) Test Method: ISO 140/3
*Average Reduction in Transmitted Noise (Rw) in accordance with ISO 717-1.

Tested FireMaster Marine Plus Systems

Application	System	EU MED	USCG
A60 Steel Deck	45mm x 64 kg/m ³ (1.77in x 4 pcf)	MED-B-3897	164.107/EC0575/3897
A60 Steel Bulkhead (Unrestricted)	75mm x 64 kg/m ³ (2.95in x 4 pcf)	MED-B-3899	164.107/EC0575/3899
A60 Steel Bulkhead (Restricted)	45mm x 64 kg/m ³ (1.77in x 4 pcf)	MED-B-3898	164.107/EC0575/3898
A60 Aluminum Deck	50mm x 70 kg/m ³ (1.96in x 4.4 pcf)	MED-B-3892	164.107/EC0575/3892
A30 Aluminum Deck	40mm x 70 kg/m ³ (1.57in x 4.4 pcf)	MED-B-3895	164.107/EC0575/3895
A60 Aluminum Bulkhead (Unrestricted)	50mm x 70 kg/m ³ (1.96in x 4.4 pcf) applied to both sides	MED-B-3894	164.107/EC0575/3894
A60 Aluminum Bulkhead (Restricted)	50mm x 70 kg/m ³ (1.96in x 4.4 pcf)	MED-B-3893	164.107/EC0575/3893
A30 Aluminum Bulkhead (Restricted)	45mm x 64 kg/m ³ (1.77in x 4 pcf)	MED-B-3896	164.107/EC0575/3896
60 Min HSC Aluminum Deck 2mm	50mm x 70 kg/m ³ (1.96in x 4.4 pcf)	MED-B-4001	
30 Min HSC Aluminum Deck 2mm	35mm x 70 kg/m ³ (1.38in x 4.4 pcf)	MED-B-3900	
60 Min HSC Aluminum Bulkhead (Restricted)	50mm x 70 kg/m ³ (1.96in x 4.4 pcf)	MED-B-4002	
30 Min HSC Aluminum Bulkhead (Restricted)	35mm x 70 kg/m ³ (1.38in x 4.4 pcf)	MED-B-3901	

* Other tested systems and certifications are available on the latest FireMaster Marine CD.

Availability

Thickness	25mm (0.98in)	35mm (1.18in)	38mm (1.37in)	40mm (1.57in)	45mm (1.77in)	50mm (1.97in)
Standard Available Densities, kg/m ³ (pcf)	64, 70, 96, 128 (4, 4.4, 6, 8)	64, 70 (4, 4.4)	96, 128 (6, 8)	64, 70 (4, 4.4)	64 (4)	64, 70, 96, 128 (4, 4.4, 6, 8)
Roll Length, m (in)	7.32m (288in)	4.88m (192in)	4.88m (192in)	4.88m (192in)	4.88m (192in)	3.66m (144in)

The values given herein are typical average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Therefore, the data contained herein should not be used for specification purposes. Check with your Thermal Ceramics office to obtain current information. Thermal Ceramics, Superwool, 607 and FireMaster are trademarks of The Morgan Crucible Company plc.