



Marine & Offshore

Certificate number: 40693/B0 BV

File number: ACI 1000/548/006

Product code: 5214H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

MORGAN ADVANCED MATERIALS THERMAL CERAMICS

WIRRAL - UNITED KINGDOM

for the type of product

"H" CLASS DIVISION, DECK, FIRE INTEGRITY

H-60 Steel Decks "FireMaster Marine Plus Blanket" (wrap profile system), 40+40 mm x 70 kg/m3

Requirements:

Bureau Veritas Rules for the Classification of Offshore Units

IMO Res. MSC.61(67)-(FTP Code) with IMO Res MSC.307(88) (2010 FTP Code) article 8 with Hydrocarbon fire temperature curve

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 19 May 2026

For Bureau Veritas Marine & Offshore,

At BV LONDON, on 19 May 2021,

Spencer Yule



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

H-60 Steel Decks "FireMaster Marine Plus Blanket" (wrap profile system), 40+40 mm x 70 kg/m³

Structural steel deck insulated with 2 layers of 40 mm of FireMaster Marine Plus Blanket, density 70 kg/m³, applied underneath the deck and in between and over the stiffeners (wrapped around stiffeners).

Cavities inside the stiffeners are left free of insulation.

Layers of 610 mm-wide strips (roll) applied transversally to the stiffeners, compressed to 600 mm wide during fitting; the 2 layers are staggered by approximatively half a strip.

Fastening arrangement:

Steel pins and steel washers (22 pins per m²)

The installation is to be performed according to the manufacturer's documentation referenced in §2.

2. DOCUMENTS AND DRAWINGS :

As per Morgan Advanced Materials' documentation:

- Fire Protection System Information FM4.90 Rev 2 dated January 2014.

- Method Statement FM-MS 01 PW Rev.8, dated September 2014.

3. TEST REPORTS :

Test report N° FT07287 dated 27.12.2007 as per IMO FTP Code, Annex 1, Part 3, using hydrocarbon time/temperature curve, issued by FEFTC, China.

4. APPLICATION / LIMITATION :

4.1 - The insulating material "**FireMaster Marine Plus Blanket**" shall comply with the requirements of the relevant Bureau Veritas Rules and be type approved.

4.2 - The fitting aboard to be the same as used for the test.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The **H-60 Steel Decks "FireMaster Marine Plus Blanket" (wrap profile system), 40+40 mm x 70 kg/m³** are to be supplied by **MORGAN ADVANCED MATERIALS THERMAL CERAMICS** in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

5.3 - **MORGAN ADVANCED MATERIALS THERMAL CERAMICS** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

5.4 - For information, **MORGAN ADVANCED MATERIALS THERMAL CERAMICS** has declared to Bureau Veritas the following production site(s):

MORGAN THERMAL CERAMICS KOREA
335 Nongon-ro
Nongong-eup, Dalseong-gun
Daegu, KOREA (REPUBLIC OF)

6. MARKING OF PRODUCT :

The product or packing is to be marked with manufacturer name, type, designation and fire-technical rating.

7. OTHERS :

7.1 - It is **MORGAN ADVANCED MATERIALS THERMAL CERAMICS**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This certificate is based on the Type Approval Certificate N°40693/A0 BV issued on 25/09/2015 by the Society.

***** END OF CERTIFICATE *****