



Marine & Offshore

Certificate number: 40655/B0 BV

File number: ACI 1000/548/4

Product code: 5000H

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

A60 CLASS BULKHEADS

A-60 Steel Bulkhead, FireMaster Marine Plus Blanket, 45 mm x 64 kg/m³

**** Restricted application : fire on insulated side ****

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships Part C, Chapter 4

SOLAS 74 Convention as amended, Regulations II-2/9, II-2/3.2

IMO Resolution MSC.307(88) - (2010 FTP Code)

IMO MSC/Circ.1120, IMO MSC.1/Circ. 1434, IMO MSC.1/Circ.1435

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:

A-60 Steel Bulkhead "FireMaster Marine Plus Blanket, 45 mm x 64 kg/m³"

Structural bulkhead insulated with "FireMaster Marine Plus Blanket", 45 mm thick, density of 64 kg/m³.
Applied laterally in between and around the stiffeners in strips of 600 mm width.
No packing required in the stiffener cavities.

Fastening arrangement : steel pins / washers

Pins spacing :

- max 300 x 345 mm between stiffeners
- max 145 mm from stiffeners

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 FM 4.69 Rev 2 dated November 2013
- Method Statement FM-MS 01 PW Rev.8, dated September 2014.

3. TEST REPORTS:

Test report n° KOMERI-0402-13T1606 dated 01.11.2013 as per IMO 2010 FTP Code, Annex 1, Part 3 from KOMERI, Korea.

4. APPLICATION / LIMITATION:

4.1 - **Restricted application:** The use is restricted to application where fire hazard has been identified as being from the insulated side.

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

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

5. PRODUCTION SURVEY REQUIREMENTS:

5.1- The **A-60 Steel Bulkhead "FireMaster Marine Plus Blanket, 45 mm x 64 kg/m³"** is 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°40655/A0 BV issued on 15/12/2015 by the Society.

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