



Marine & Offshore

Certificate number: 18949/C0 BV

File number: AC11000/499/025

Product code: 5072H

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

SAINT-GOBAIN ISOVER G+H AG

Ludwigshafen - GERMANY

for the type of product

"A" CLASS DIVISIONS

A-30 Class Alu Bulkhead, type U SeaProtect Slab 66 - 2*30/30 mm**

A-60 Class Alu Bulkheads, type:

- U SeaProtect Slab 66 - 2*(2*30)/30 mm
- U SeaProtect Slab 66 - 2x30/2x30 mm**
- U SeaProtect Wired Mat 66 - 2*70 mm

**Restricted application

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

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: 22 Mar 2024

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 22 Mar 2019,

Jens Bauermeister



This certificate is recognized by Transport Canada

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.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

A-30 Class Alu Bulkhead, type U SeaProtect Slab 66 - 2*30/30 mm * Restricted application *

Composed of structural 6 mm thick aluminium bulkhead insulated on exposed stiffened side with mineral wool:

- 2*30 mm "U SeaProtect Slab 66" (former "ULTIMATE U MPN 66"; nominal density 66 kg/m³) between stiffeners,
- 30 mm "U SeaProtect Slab 66" (former "ULTIMATE U MPN 66"; nominal density 66 kg/m³) wrapped around stiffeners (cavities inside stiffeners are also filled).

Fastening welded pins :

- max spacing 300 mm horizontally and vertically on plate between stiffeners,
- max spacing 150 mm around stiffeners.

A-60 Class Alu Bulkhead, type U SeaProtect Slab 66 - 2*(2*30)/30 mm

Composed of structural 6 mm thick aluminium bulkhead insulated on both sides with mineral wool:

- 2*30 mm "U SeaProtect Slab 66" (former "ULTIMATE U MPN 66"; nominal density 66 kg/m³) on exposed side,
- 2*30 mm "U SeaProtect Slab 66" (former "ULTIMATE U MPN 66"; nominal density 66 kg/m³) in between stiffeners,
- 30 mm "U SeaProtect Slab 66" (former "ULTIMATE U MPN 66"; nominal density 66 kg/m³) wrapped around stiffeners (cavities inside stiffeners are also filled).

Fastening welded pins :

- max spacing 300 mm on exposed side,
- max spacing 300 mm horizontally and 400 mm vertically on plate between stiffeners,
- max spacing 150 mm around stiffeners.

A-60 Class Alu Bulkhead, type U SeaProtect Slab 66 - 2x30/2x30 mm * Restricted application *

Composed of structural 6 mm thick aluminium bulkhead insulated on exposed stiffened side with mineral wool:

- 2x30 mm "U SeaProtect Slab 66" (former "ULTIMATE U MPN 66"; nominal density 66 kg/m³) between stiffeners,
- 2x30 mm "U SeaProtect Slab 66" (former "ULTIMATE U MPN 66"; nominal density 66 kg/m³) wrapped around stiffeners (cavities inside stiffeners are also filled).

Steel pins with washers :

- max spacing 300 mm horizontally and vertically on plate between stiffeners,
- max spacing 150 mm around stiffeners.

A-60 Class Alu Bulkhead, type U SeaProtect Wired Mat 66 - 2*70 mm

Composed of structural 6 mm thick aluminium bulkhead insulated on both sides with 70 mm of mineral wool "U SeaProtect Wired Mat 66" (former "ULTIMATE U MWM 66"; nominal density 66 kg/m³). The cavities inside stiffeners are also filled with this insulating material.

Fastening welded pins :

- max spacing 300 mm on exposed side,
- max spacing 300 mm horizontally and 400 mm vertically on plate between stiffeners,
- max spacing 150 mm around stiffeners.

2. DOCUMENTS AND DRAWINGS :

As per Manufacturer's drawings:

- 2.1 - **A-30 Class Alu Bulkhead, type U SeaProtect Slab 66 - 2*30/30 mm**: N° 2006/09/12 dated 09/2006.
- 2.2 - **A-60 Class Alu Bulkhead, type U SeaProtect Slab 66 - 2*(2*30)/30 mm**: N° 2006/03/09 dated 03/2006.
- 2.3 - **A-60 Class Alu Bulkhead, type U SeaProtect Slab 66 - 2x30/2x30 mm**: N° AK2181 Index A dated 19/07/2007.
- 2.4 - **A-60 Class Alu Bulkhead, type U SeaProtect Wired Mat 66 - 2*70 mm**: N° AK2163 Index A dated 02/09/2008.

3. TEST REPORTS:

Tests reports as per IMO FTP Code Annex 1 Part 3 [test standard : IMO Resolution A.754(18)]:

- 3.1 - **A-30 Class Alu Bulkhead, type U SeaProtect Slab 66 - 2*30/30 mm**: N° 2006CS01651/1 dated 08/03/2006, from RINA, Italia.
- 3.2 - **A-60 Class Alu Bulkhead, type U SeaProtect Slab 66 - 2*(2*30)/30 mm**: N° 2006CS01651/1 dated 08/03/2006, from RINA, Italia.
- 3.3 - **A-60 Class Alu Bulkhead, type U SeaProtect Slab 66 - 2x30/2x30 mm**: N° PG 11740 Serial No.11343 dated 16/11/2007, from DIFT, Denmark.
- 3.4 - **A-60 Class Alu Bulkhead, type U SeaProtect Wired Mat 66 - 2*70 mm**: N° 2008CS014213/2 dated 08/09/2008, from RINA, Italia.

4. APPLICATION / LIMITATION:

4.1 - **Restricted application:** fire risk towards insulated side when specified under §1.

4.2 - The following insulating materials shall comply with the requirements of the relevant Bureau Veritas rules and be type approved:

- "U SeaProtect Slab 66"
- "U SeaProtect Wired Mat 66"

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

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The bulkheads are to be supplied by **SAINT-GOBAIN ISOVER G+H AG** 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 - **SAINT-GOBAIN ISOVER G+H AG** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

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 **SAINT-GOBAIN ISOVER G+H AG'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 supersedes the Type Approval Certificate N° 18949/B0 BV issued on 05/11/2013 by the Society.

*** END OF CERTIFICATE ***