



Marine & Offshore

Certificate number: 18956/D0 BV
File number: ACI1000/499/003-008, 010-013, 028-032
Product code: 5210H

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

NON-COMBUSTIBLE MATERIALS

ISOVER Marine Ultimate U SeaProtect Non-Combustible Products

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships, Part C, Ch. 4
 SOLAS 74 convention as amended, Regulations II-2/3, II-2/5, II-2/9, X/3
 IMO Res. MSC.36(63) -(1994 HSC Code)- as amended, 7
 IMO Res. MSC.97(73) -(2000 HSC Code)- as amended, 7
 IMO Res MSC.307(88) -(2010 FTP Code)-
 IMO Res. MSC.61(67) -(FTP Code)- with IMO Res MSC.307(88) -(2010 FTP Code)- article 8
 IMO MSC/Circ.1120

Transport Canada Requirements:

TP 14612

Vessel Fire Safety Regulations

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: 20 Sep 2028

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 20 Sep 2023,

Udo Storm

This certificate was created electronically and is valid without signature



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 :

ISOVER ULTIMATE mineral wool based products:

1.1 - Rolls

| Reference | Description | Wool density | Organic content |
|--|--|----------------------------|--|
| U SeaProtect Roll 13 - U SeaProtect Roll 56 | Glass wool | 13 to 56 kg/m ³ | 13-24 kg/m ³ : 4.7 % 23 kg/m ³ : 6.1% 25-26 kg/m ³ : 2.4% |
| U SeaProtect Roll 24 Alu1 | Glass wool faced on one side with an aluminium foil reinforced with a fiberglass grid (approx. 70 g/m ²) Thickness: 30 – 120 mm | 24 kg/m ³ | 4.7% |

1.2 - Slabs

| Reference | Description | Wool density | Organic content |
|---|--|-----------------------------|---|
| U SeaProtect Slab 24 - U SeaProtect Slab 100 | Glass wool | 24 to 100 kg/m ³ | 24-35 kg/m ³ : 4.7 % 36-100 kg/m ³ : 2.4% |
| U SeaProtect Slab Plus 100 | Glass wool | 100 kg/m ³ | 3.6% |
| U SeaProtect Slab 20 Alu1 - U SeaProtect Slab 120 Alu1 | Glass wool faced on one side with an aluminium foil reinforced with a fiberglass grid (approx. 70 g/m ²) Slab 20 Alu1 : 30 – 100 mm Slab 120 Alu1 : 30 – 60 mm | 20 to 120 kg/m ³ | 20-35 kg/m ³ : 4.7 % 36-120 kg/m ³ : 2.4% |
| U SeaProtect Slab 66 A-A | Glass wool faced on both sides with a glassfiber reinforced aluminium foil (approx. 80 g/m ²) Slab 66 A-A : 30 - 50 mm | 66 kg/m ³ | 2.4% |
| U SeaProtect Slab 24 B-Al - U SeaProtect Slab 100 B-Al | Glass wool faced on one side with an aluminium-coated glass cloth (approx. 220 g/m ²) *aluminium side outside Slab 24 B-Al : 30 – 100 mm Slab 100 B-Al: 30 – 60 mm | 24 to 100 kg/m ³ | 24-35 kg/m ³ : 4.7 % 36-100 kg/m ³ : 2.4% |
| U SeaProtect Slab 24-B-Gl - U SeaProtect Slab 100 B-Gl | Glass wool faced on one side with an aluminium-coated glass cloth (approx. 220 g/m ²) * aluminium cloth side outside Slab 24 B-Gl : 30 – 100 mm Slab 100 B-Gl: 30 – 60 mm | 24 to 100 kg/m ³ | 24-35 kg/m ³ : 4.7 % 36-100 kg/m ³ : 2.4% |
| U SeaProtect Slab 24 G120 - U SeaProtect Slab 90 G120 | Glass wool faced on one side with a black glass cloth (approx. 120 g/m ²) Slab 24 G120 : 30 -100 mm Slab 90 G120 : 30 – 60 mm | 24 to 90 kg/m ³ | 24-35 kg/m ³ : 4.7 % 36-100 kg/m ³ : 2.4% |
| U SeaProtect Slab 20 G220 | Glass wool faced on one side with a white glass cloth (approx. 220 g/m ²) Thickness : 30 -100 mm | 20 kg/m ³ | 4.7% |
| U SeaProtect Slab 20 V2 - U SeaProtect Slab 90 V2 | Glass wool faced on one side with a black reinforced glass veil (approx. 60g/m ²) Slab 20 V2 : 30 -100 mm Slab 90 V2 : 30 – 60 mm | 20 to 90 kg/m ³ | 20-35 kg/m ³ : 4.7 % 34 kg/m ³ : 6.1 % 36-90 kg/m ³ : 2.4% |

** Following on next page**

1.3 - Wired Mats

| Reference | Description | Wool density | Organic content |
|--|---|----------------------------|-----------------|
| U SeaProtect Wired Mat 36 - U SeaProtect Wired Mat 86 | Glass wool faced on one side with a wired mesh (approx. 270 g/m ²) Wired Mat 36: 50 - 120 mm Wired Mat 86: 30 - 100 mm | 36 to 86 kg/m ³ | 1.6% |
| U SeaProtect Wired Mat 36 Alu1 U SeaProtect Wired Mat 66 Alu1 | Glass wool faced on one side with a wired mesh (approx. 270 g/m ²) and an aluminium foil reinforced with a fiberglass grid (approx. 70 g/m ²) between the wool and the wired mesh Wired Mat 36 Alu1: 50 - 100 mm Wired Mat 66 Alu1: 30 - 100 mm | 36 to 66 kg/m ³ | 1.6% |

2. DOCUMENTS AND DRAWINGS :

Technical data sheets :

2.1 - Rolls

| | |
|--|--------------------------------|
| U SeaProtect Roll 13 - U SeaProtect Roll 56 | November 2022 November 2022 |
| U SeaProtect Roll 24 Alu1 | November 2022 |

2.2 - Slabs

| | |
|---|--------------------------------|
| U SeaProtect Slab 24 - U SeaProtect Slab 100 | November 2022 November 2022 |
| U SeaProtect Slab Plus 100 | May 2023 |
| U SeaProtect Slab 20 Alu1 - U SeaProtect Slab 120 Alu1 | May 2023 August 2023 |
| U SeaProtect Slab 66 A-A | November 2022 |
| U SeaProtect Slab 24 B-A1 - U SeaProtect Slab 100 B-A1 | November 2022 November 2022 |
| U SeaProtect Slab 24-B-G1 - U SeaProtect Slab 100 B-G1 | November 2022 November 2022 |
| U SeaProtect Slab 24 G120 - U SeaProtect Slab 90 G120 | November 2022 November 2022 |
| U SeaProtect Slab 20 G220 | May 2023 |
| U SeaProtect Slab 20 V2 - U SeaProtect Slab 90 V2 | May 2023 November 2022 |

2.3 - Wired Mats

| | |
|--|--------------------------------|
| U SeaProtect Wired Mat 36 - U SeaProtect Wired Mat 86 | November 2022 November 2022 |
| U SeaProtect Wired Mat 36 Alu1 - U SeaProtect Wired Mat 66 Alu1 | November 2022 November 2022 |

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3. TEST REPORTS :**3.1 - Rolls**

| Reference | Test report N° | Date | Laboratory |
|--|--|-------------|---|
| U SeaProtect Roll 13 - U SeaProtect Roll 56 | N° PFB10004a (24 kg/m ³) [1] | 01/08/2011 | DIFT, Denmark |
| | N° 2014-2257 (36 kg/m ³) [2] | 20/01/2015 | Exova Warringtonfire, Germany |
| | N° 2014-2258 (13 kg/m ³) [2] | 20/01/2015 | Exova Warringtonfire, Germany |
| | N° PFB 10286AB (56 kg/m ³) [2] | 05/01/2018 | DBI, Denmark |
| | N° PFB 10286AA (13 kg/m ³) [2] | 05/01/2018 | DBI, Denmark |
| | N° 221110 (56 kg/m ³) [2] | 21/12/2022 | Warringtonfire Frankfurt GmbH, Germany |
| | N° 221114 (36 kg/m ³) [2] | 29/12/2022 | Warringtonfire Frankfurt GmbH, Germany |
| | N° 221113 (23 kg/m ³) [2] | 29/12/2022 | Warringtonfire Frankfurt GmbH, Germany |
| U SeaProtect Roll 24 Alu1 | N°PFB1004b (24 kg/m ³) [1] | 01/08/2011 | DIFT, Denmark |

[1] Test as per IMO FTP Code, Annex 1, part 1 [test standard: ISO 1182]

[2] Test as per IMO 2010 FTP Code, Annex 1, part 1

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3.2 - Slabs

| Reference | Test report N° | Date | Laboratory |
|---|---|------------|--|
| U SeaProtect Slab 24 - U SeaProtect Slab 100 | N° 2009CS011684/1 (24 kg/m ³) [1] | 14/07/2009 | RINA, Italy |
| | N° 2009CS011684/2 (66 kg/m ³) [1] | 15/07/2009 | RINA, Italy |
| | N° 20631953 (66 kg/m ³) [2] | 08/10/2012 | DMT GmbH & Co. KG, Germany |
| | N° PFB 10064b (86 kg/m ³) [2] | 01/02/2013 | DBI, Denmark |
| | N° PFB 10064a (46 kg/m ³) [2] | 01/02/2013 | DBI, Denmark |
| | N° 20645633-10 (66 kg/m ³) [2] | 07/10/2014 | DMT GmbH & Co. KG, Germany |
| | N° PFB 10286AD (100 kg/m ³) [2] | 01/05/2018 | DBI, Denmark |
| | N° PFB 10286AC (24 kg/m ³) [2] | 01/05/2018 | DBI, Denmark |
| | N° 221109 (76 kg/m ³) [2] | 25/11/2022 | Warringtonfire Frankfurt GmbH, Germany |
| | N° 221115 (36 kg/m ³) [2] | 25/11/2022 | Warringtonfire Frankfurt GmbH, Germany |
| U SeaProtect Slab Plus 100 | N° 220837 [2] | 03/11/2022 | Warringtonfire Frankfurt GmbH, Germany |
| U SeaProtect Slab 20 Alu1 - U SeaProtect Slab 120 Alu1 | N° 2011-B-3446/02 (20 kg/m ³) [1] | 09/09/2011 | MPA Dresden GmbH, Germany |
| | N° NN08/6150.1 (120 kg/m ³) [1] | 14/10/2008 | TÜV Nord Bauqualität GmbH & Co. KG, Germany |
| U SeaProtect Slab 66 A-A | N° 8115692788-10a [2] | 27/06/2018 | DMT GmbH & Co. KG, Germany |
| | N° 8115692788-10b [2] | 27/06/2018 | |
| | N° 8115692788-10c [2] | 18/07/2018 | |
| | N° 81790764-10 [2] | 10/07/2020 | |
| U SeaProtect Slab 24 B-Al - U SeaProtect Slab 100 B-Al | N° NN09/6790.1 (90 kg/m ³) [1] | 01/10/2009 | TUV Nord Bauqualität GmbH & Co. KG, Germany |
| | N° NN09/6790.2 (66 kg/m ³) [1] | 01/10/2009 | TÜV Nord Bauqualität GmbH & Co. KG, Germany |
| | N° NN10/7191.1 (24 kg/m ³) [1] | 12/05/2010 | TÜV Nord Bauqualität GmbH & Co. KG, Germany |
| U SeaProtect Slab 24-B-GI - U SeaProtect Slab 100 B-GI | N° NN09/6790.1 (90 kg/m ³) [1] | 01/10/2009 | TUV Nord Bauqualität GmbH & Co. KG, Germany |
| | N° NN09/6790.2 (66 kg/m ³) [1] | 01/10/2009 | TÜV Nord Bauqualität GmbH & Co. KG, Germany |
| | N° NN10/7191.1 (24 kg/m ³) [1] | 12/05/2010 | TÜV Nord Bauqualität GmbH & Co. KG, Germany |

[1] Test as per IMO FTP Code, Annex 1, part 1 [test standard: ISO 1182]

[2] Test as per IMO 2010 FTP Code, Annex 1, part 1

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| Reference | Test report N° | Date | Laboratory |
|--|---|------------|----------------------------|
| U SeaProtect Slab 24 G120 - U SeaProtect Slab 90 G120 | N° PF13051 (90 kg/m ³) [1] | 02/02/2009 | DBI, Denmark |
| | N° 20630989 (24 kg/m ³) [1] | 02/07/2012 | DMT GmbH & Co. KG, Germany |
| U SeaProtect Slab 20 G220 | N°2010-B-4895.5 (20 kg/m ³) [1] | 25/01/2011 | MPA Dresden GmbH, Germany |
| U SeaProtect Slab 20 V2 - U SeaProtect Slab 90 V2 | N° 2011-B-3446/01 (20 kg/m ³) [1] | 09/09/2011 | MPA Dresden GmbH, Germany |
| | N° 20629007 (34 kg/m ³) [1] | 24/04/2012 | DMT GmbH & Co. KG, Germany |
| | N° 220877 (90 kg/m ³) [2] | 03/11/2022 | DBI, Denmark |

[1] Test as per IMO FTP Code, Annex 1, part 1 [test standard: ISO 1182]

[2] Test as per IMO 2010 FTP Code, Annex 1, part 1

3.3 - Wired Mats

| Reference | Test report N° | Date | Laboratory |
|--|--|------------|---|
| U SeaProtect Wired Mat 36 - U SeaProtect Wired Mat 86 | N° 2010-B-4895.4 (36 kg/m ³) [1] | 25/01/2011 | MPA Dresden GmbH, Germany |
| | N° 2010-B-4895.2 (66 kg/m ³) [1] | 24/01/2011 | MPA Dresden GmbH, Germany |
| | N° 210403 (36 and 86 kg/m ³) [2] | 23/06/2021 | Warringtonfire Frankfurt GmbH, Germany |
| | N° 221111 (36 kg/m ³) [2] | 21/12/2022 | Warringtonfire Frankfurt GmbH, Germany |
| | N° 221112 (76 kg/m ³) [2] | 29/12/2022 | Warringtonfire Frankfurt GmbH, Germany |
| U SeaProtect Wired Mat 36 Alu1 - U SeaProtect Wired Mat 66 Alu1 | N° NN09/6374.1 (66 kg/m ³) [1] | 15/05/2009 | TUV Nord Bauqualität GmbH & Co. KG, Germany. |
| | N° NN09/6493 (36 kg/m ³) [1] | 02/06/2009 | TÜV Nord Bauqualität GmbH & Co. KG, Germany. |

[1] Test as per IMO FTP Code, Annex 1, part 1 [test standard: ISO 1182]

[2] Test as per IMO 2010 FTP Code, Annex 1, part 1

4. APPLICATION / LIMITATION :

Nil.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The non-combustible products are to be supplied by **Saint-Gobain ISOVER G+H AG** in 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.

5.4 - For information, **Saint-Gobain ISOVER G+H AG** has declared to Bureau Veritas the following production site(s):

Saint-Gobain ISOVER G+H AG
Industriestrasse 11
D-19386 Lübz

6. MARKING OF PRODUCT :

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

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°18956/C1 BV issued on 16/11/2018 by the Society.

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