



Marine & Offshore

Certificate number: 18956/C1 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

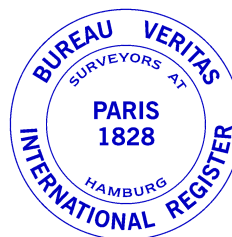
Requirements:

Bureau Veritas Rules for the Classification of Steel Ships, Part C, Ch. 4
 SOLAS 74, as amended, Chapter II.2
 IMO Res. MSC.61(67)-(FTP Code) with IMO MSC.307(88) (2010 FTP Code) article 8
 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 Nov 2022

For Bureau Veritas Marine & Offshore,
 At BV HAMBURG, on 16 Nov 2018,
 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 :

ISOVER Marine Felt ULTIMATE U SeaProtect Roll 13 Alu1 to 24 Alu1

Non-combustible glass wool felt covered on one side with an aluminium foil reinforced with a fiberglass grid (approx. 70 g/m²).
Nominal density of wool : 13 to 24 kg/m³

ISOVER Marine Felt ULTIMATE U SeaProtect Roll 20 G220 to 36 G220

Non-combustible glass wool felt covered on one side with a white glass cloth (210-220 g/m²).
Nominal density of wool : 20 to 36 kg/m³

ISOVER Marine Felt ULTIMATE U SeaProtect Roll 22 G420

Non-combustible glass wool felt covered on one side with a white glass cloth (approx. 420 g/m²).
Nominal density of wool : 22 kg/m³

ISOVER Marine Felt ULTIMATE U SeaProtect Roll 13 to 36

Non-combustible glass wool felt.
Nominal density : 13 to 36 kg/m³

ISOVER Marine Felt ULTIMATE U SeaProtect Roll 13 V1 to 36 V1

Non-combustible glass wool felt covered on one side with a yellow reinforced fiberglass tissue (approx. 35 g/m²).
Nominal density of wool : 13 to 36 kg/m³

ISOVER Marine Felt ULTIMATE U SeaProtect Roll 13 V2 to 36 V2

Non-combustible glass wool felt covered on one side with a black reinforced fiberglass tissue (approx. 60 g/m²).
Nominal density of wool : 13 to 36 kg/m³

ISOVER Marine Slab ULTIMATE U SeaProtect Slab 20 Alu1 to 120 Alu1

Non-combustible glass wool slab covered on one side with an aluminium foil reinforced with a fiberglass grid (approx. 70 g/m²).
Nominal density of wool : 20 to 120 kg/m³

ISOVER Marine Slab ULTIMATE U SeaProtect Slab 66 A-A

Non-combustible glass wool slab covered on both sides with a glassfiber reinforced aluminium foil (approx. 80 g/m²).
Nominal density of wool : 66 kg/m³

ISOVER Marine Slab ULTIMATE U SeaProtect Slab 20 B-A1 to 100 B-A1, U SeaProtect Slab 20-B-G1 to 100 B-G1

Non-combustible glass wool slab covered on one side with an aluminium-coated glass cloth (approx. 220 g/m²).
B-A1 : aluminium side outside / B-G1 : glass cloth side outside
Nominal density of wool : 20 to 100 kg/m³

ISOVER Marine Slab ULTIMATE U SeaProtect Slab 20 G120 to 90 G120, U SeaProtect Slab 20 G220 to 90 G220, U SeaProtect Slab 20 G420 to 90 G420

Non-combustible glass wool slab covered on one side with a black (for G120) glass cloth (approx. 120 g/m²) or white (for G220 and G420) glass cloth (respectively approx. 220 g/m² and approx. 420 g/m²).
Nominal density of wool : 20 to 90 kg/m³

ISOVER Marine Slab ULTIMATE U SeaProtect Slab 20 to 100

Non-combustible glass wool slab.
Nominal density : 20 to 100 kg/m³

ISOVER Marine Slab ULTIMATE U SeaProtect Slab 20 V2 to 90 V2

Non-combustible glass wool slab covered on one side with a black reinforced glass veil (approx. 60g/m²).
Nominal density of wool : 20 to 90 kg/m³

ISOVER ULTIMATE U SeaProtect Wired Mat 36 to 66

Non-combustible glass wool slab covered on one side with a wired mesh (approx. 270 g/m²).
Nominal density of wool : 36 to 66 kg/m³

ISOVER ULTIMATE U SeaProtect Wired Mat 36 V1 to 66 V1

Non-combustible glass wool slab covered on one side with a wired mesh (approx. 270 g/m²) and a glass tissue (approx. 35 g/m²) between the wool and the wired mesh.
Nominal density of wool : 36 to 66 kg/m³

ISOVER ULTIMATE U SeaProtect Wired Mat 36 Alu1 to 66 Alu1

Non-combustible glass wool slab covered on one side with a wired mesh (approx. 270 g/m²) and an aluminium foil reinforced with a fiberglass grid (approx. 70 g/m²) between the wool and the wired mesh.
Nominal density of wool : 36 to 66 kg/m³

2. DOCUMENTS AND DRAWINGS :

Technical data sheets :

ISOVER Marine Felt ULTIMATE U SeaProtect Roll 13 Alu1 to 24 Alu1 dated 25/08/2015
ISOVER Marine Felt ULTIMATE U SeaProtect Roll 20 G220 to 36 G220 dated 22/09/2015
ISOVER Marine Felt ULTIMATE U SeaProtect Roll 22 G420 dated 03/2009
ISOVER Marine Felt ULTIMATE U SeaProtect Roll 13 to 36 dated 25/08/2015
ISOVER Marine Felt ULTIMATE U SeaProtect Roll 13 V1 to 36 V1 dated 25/08/2015
ISOVER Marine Felt ULTIMATE U SeaProtect Roll 13 V2 to 36 V2 dated 11/2017
ISOVER Marine Slab ULTIMATE U SeaProtect Slab 20 Alu1 to 120 Alu1 dated 06/10/2015
ISOVER Marine Slab ULTIMATE U SeaProtect Slab 66 A-A dated 06/10/2015
ISOVER Marine Slab ULTIMATE U SeaProtect Slab 20 B-AI to 100 B-AI, U SeaProtect Slab 20-B-GI to 100 B-GI dated 22/09/2015
ISOVER Marine Slab ULTIMATE U SeaProtect Slab 20 G120 to 90 G120, dated 25/08/2015
U SeaProtect Slab 20 G220 to 90 G220, U SeaProtect Slab 20 G420 to 90 G420 dated 22/09/2015
ISOVER Marine Slab ULTIMATE U SeaProtect Slab 20 to 100 dated 06/10/2015
ISOVER Marine Slab ULTIMATE U SeaProtect Slab 20 V2 to 90 V2 dated 23/05/2016
ISOVER ULTIMATE U SeaProtect Wired Mat 36 to 66, 36 V1 to 66 V1 and 36 Alu1 to 66 Alu1 dated 25/08/2015

3. TEST REPORTS :

ISOVER Marine Felt ULTIMATE U SeaProtect Roll 13 Alu1 to 24 Alu1 : Test reports N° PF11769e (13 kg/m³) dated 01/06/2004, PF11769b (22 kg/m³) dated 01/06/2004 and N° PFB1004b (24 kg/m³) dated 01/08/2011, as per IMO FTPC Annex 1 Part 1, from DIFT, Denmark.

ISOVER Marine Felt ULTIMATE U SeaProtect Roll 20 G220 to 36 G220 : Test reports N° NN06/4862.2 (20 kg/m³) dated 09/05/2007 and N° NN06/4862.3 (36 kg/m³) dated 09/05/2007, as per IMO FTPC Annex 1 Part 1, from TÜV Nord Bauqualität GmbH & Co. KG, Germany.

ISOVER Marine Felt ULTIMATE U SeaProtect Roll 22 G420 : Test report N° PF11769a dated 25/06/2004, as per IMO FTPC Annex 1 Part 1, from DIFT, Denmark.

ISOVER Marine Felt ULTIMATE U SeaProtect Roll 13 to 36 : Test reports N° PF11769d (13 kg/m³) dated 01/06/2004, N° PF11769c (22 kg/m³) dated 01/06/2004, N° PF11881i (36 kg/m³) dated 04/10/2004 and N° PFB10004a (24 kg/m³) dated 01/08/2011, as per IMO FTPC Annex 1 Part 1, from DIFT/DBI, Denmark.

ISOVER Marine Felt ULTIMATE U SeaProtect Roll 13 V1 to 36 V1 / / ISOVER Marine Felt ULTIMATE U SeaProtect Roll 13 V2 to 36 V2 : Test reports N° NN06/5071.2 (13 kg/m³, black) dated 16.02.2007, N° NN06/5071.3 (36 kg/m³, black) dated 20.02.2007, N° NN06/5071.4 (13 kg/m³, yellow) dated 20.02.2007 and N° NN06/5071.1 (36 kg/m³, yellow) dated 20.02.2007, as per IMO FTPC Annex 1 Part 1, from TÜV Nord Bauqualität GmbH & Co. KG, Germany.

ISOVER Marine Slab ULTIMATE U SeaProtect Slab 20 Alu1 to 120 Alu1 : Test reports N° 2011-B-3446/02 (20 kg/m³) dated 09/09/2011, as per IMO FTP Code Annex 1, Part 1, from MPA Dresden GmbH, Germany, and N° NN08/6150.1 (120 kg/m³) dated 14/10/2008 as per IMO FTP Code, Annex 1, Part 1, from TÜV Nord Bauqualität GmbH & Co. KG, Germany.

ISOVER Marine Slab ULTIMATE U SeaProtect Slab 66 A-A : Test report N° NN06/4862.1 dated 06/07/2007, as per IMO FTPC Annex 1 Part 1, from TÜV Nord Bauqualität GmbH & Co. KG, Germany.

ISOVER Marine Slab ULTIMATE U SeaProtect Slab 20 B-AI to 100 B-AI, U SeaProtect Slab 20-B-GI to 100 B-GI : Test reports N° NN09/6790.1 (90 kg/m³) dated 01/10/2009, N° NN09/6790.2 (66 kg/m³) dated 01/10/2009 and N° NN10/7191.1 (24 kg/m³) dated 12/05/2010 as per IMO FTPC Part 1 from TÜV Nord Bauqualität GmbH & Co. KG, Germany.

ISOVER Marine Slab ULTIMATE U SeaProtect Slab 20 G120 to 90 G120, U SeaProtect Slab 20 G220 to 90 G220, U SeaProtect Slab 20 G420 to 90 G420 : Test reports N° PF11769h (25 kg/m³, G420 facing) dated 02/06/2004, N° PF11881b (25 kg/m³, G120 facing) dated 04/10/2004, N° PF11881c (25 kg/m³, G220 facing) dated 04/10/2004, N° PF11881d (90 kg/m³, G120 facing) dated 04/10/2004, N° PF11881f (90 kg/m³, G420 facing) dated 04/10/2004, as per IMO FTPC Annex 1 Part 1, from DIFT, Denmark, N°2010-B-4895.5 (20 kg/m³, G220 facing) dated 25/01/2011, as per IMO FTPC Annex 1 Part 1, from MPA Dresden GmbH, Germany and N° PF13051 (90 kg/m³, G120 facing) dated 02/02/2009, as per IMO FTPC Annex 1 part 1, from DBI, Denmark.

ISOVER Marine Slab ULTIMATE U SeaProtect Slab 20 to 100 : Test reports N° PF11734 (97 kg/m³) dated 16/03/2004, N° PF11769r (25 kg/m³) dated 09/06/2004 as per IMO FTPC Annex 1 Part 1, from DIFT, Denmark, N° NN06/4714.1 (100 kg/m³) dated 13/04/2006, as per IMO FTPC Annex 1 Part 1, from TÜV Nord Bauqualität GmbH & Co. KG, Germany, N° 2009CS011684/1 (24 kg/m³) dated 14/07/2009 and N° 2009CS011684/2 (66 kg/m³) dated 15/07/2009, as per IMO FTPC Annex 1 Part 1, from RINA, Italy.

ISOVER Marine Slab ULTIMATE U SeaProtect Slab 20 V2 to 90 V2 : Test reports N° 2011-B-3446/01 (20 kg/m³) dated 09/09/2011, as per IMO FTPC, Annex 1, Part 1, from MPA Dresden GmbH, Germany, N° PF11769f (25 kg/m³) dated 02/06/2004, as per IMO FTPC Annex 1 Part 1, from DIFT, Denmark and N°PF11881a (90 kg/m³) dated 04/10/04, as per IMO FTPC, Annex 1, Part 1, from DIFT, Denmark.

ISOVER ULTIMATE U SeaProtect Wired Mat 36 to 66 : Test reports N° 2010-B-4895.2 (66 kg/m³) dated 24/01/2011 and N° 2010-B-4895.4 (36 kg/m³) dated 25/01/2011, as per IMO FTPC Annex 1 Part 1, from MPA Dresden GmbH, Germany.

ISOVER ULTIMATE U SeaProtect Wired Mat 36 V1 to 66 V1 : Test reports N° 2008CS013180/1 (66 kg/m³, 30 mm) dated 14/07/2009, N° 2008CS013180/2 (66 kg/m³, 90 mm) dated 14/07/2009, as per IMO FTPC Annex 1 Part 1, from RINA, Italy, N° PF12943a (36 kg/m³, 30 mm) dated 23/09/2008 and N° PF12943b (36 kg/m³, 100 mm) dated 23/09/2008, as per IMO FTPC Annex 1 Part 1, from DIFT, Denmark.

ISOVER ULTIMATE U SeaProtect Wired Mat 36 Alu1 to 66 Alu1 : Test reports N° NN09/6374.1 (66 kg/m³) dated 15/05/2009 and N° NN09/6493 (36 kg/m³) dated 02/06/2009, as per IMO FTPC Annex 1 Part 1, from TÜV Nord Bauqualität GmbH & Co. KG, Germany.

4. APPLICATION / LIMITATION :

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

4.2 - In application of FTP Code 2010 Annex 2 § 2.1, the product is expected to satisfy the requirement of smoke & toxicity without further testing.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The non-combustible products 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.

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
DEU-19386 Lübz

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°18956/C0 BV issued on 22/11/2017 by the Society.

*** END OF CERTIFICATE ***