



MARINE DIVISION

Certificate number: 19367/B0 BV
File number: ACI 1300/222/001 to 009
Product code: 5230H

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

PAROC GROUP OY
 HELSINKI - FINLAND

for the type of product

SURFACE LININGS

AluCoat, AluCoat T, LF1, LF1 tape, G1, G2, G3, G4, G7, N3 and N5 facings to be applied on non-combustible PAROC Marine wools.

Requirements:

BV Rules Part C, Chapter 4 -

SOLAS 74 Convention, as amended, Reg. II-2/3, II-2/5 - IMO Resolution MSC.97(73) (2000 HSC Code) 7 -

IMO Resolution MSC.61(67)(FTP Code) Annex 1, Parts 5 and Annex 2 - IMO MSC/Circ.1120.

This certificate is issued to attest that BUREAU VERITAS 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: 27 Feb 2017

For BUREAU VERITAS,

At BV HELSINKI, on 27 Feb 2012,

Tommy Andersson



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. 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 Division 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 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:

Designation	Description	Nominal weight	Glue between mineral wool and facing
AluCoat	glass fibre scrim reinforced aluminium foil	64-80 g/m ²	Polyethylene glue (20 g/m ²)
AluCoat T	glass fibre scrim reinforced aluminium foil with double sided PET tape	80 g/m ²	Polyethylene glue (20 g/m ²)
LF1 (AluCoat Lacquer)	glass fibre scrim reinforced aluminium foil covered with lacquer	97 g/m ²	Polyethylene glue (20 g/m ²)
LF1 Tape	glass fibre scrim reinforced aluminium foil covered with lacquer	104 g/m ²	Acrylic adhesive. Tape used to bind wool mats with covering of type LF1
G1	white glass fibre cloth	210 g/m ²	DORUS ID 500 glue (27 g/m ²) manufactured by Henkel Norden Oy
G2	black glass fibre cloth	200 g/m ²	DORUS ID 500 glue (27 g/m ²) manufactured by Henkel Norden Oy
G3	white glass fibre cloth	430 g/m ²	DORUS ID 500 glue (27 g/m ²) manufactured by Henkel Norden Oy
G4	white glass fibre cloth with aluminium facing	250 g/ m ²	DORUS ID 500 glue (27 g/m ²) manufactured by Henkel Norden Oy
G4	white glass fibre cloth with aluminium facing	250 g/ m ²	Polyethylene glue (30 g/m ²)
G7	white glass fibre cloth with aluminium facing	200 g/m ² + 50 g/m ²	DORUS ID 500 glue (27 g/m ²) manufactured by Henkel Norden Oy
N3	black glass fibre felt	60 g/m ²	No (attached by the curing procedure of the wool without any glue)
N5	grey glass fibre felt	60 g/m ²	No (attached by the curing procedure of the wool without any glue)

2. DOCUMENTS AND DRAWINGS :

None.

3. TEST REPORTS:**3.1 - Surface flammability:**

Designation	Test report reference	Date of issue	Laboratory
AluCoat	N°RTE4129/04 N° VTT-S-123-08	December 27, 2004 January 9, 2008	VTT, Finland
AluCoat T	N° VTT-S-10314-08	December 4, 2008	VTT, Finland
LF1 (AluCoat Lacquer)	N° TZ/FTP-5/140/2010	May 27, 2010	West pomeranian university of technology, Szczecin
LF1 tape	N° VTT-S-5669-11	24 August 2011	VTT, Finland
G1	N°RTE4130/04	December 27, 2004	VTT, Finland
G2	N°RTE3516/04	September 30, 2005	VTT, Finland
G3	N°RTE4133/04	December 27, 2004	VTT, Finland
G4 (Teokoll 500 glue)	N° VTT-7964-07	September 24, 2007	VTT, Finland
G4 (polyethylene glue)	N° VTT-S-9327-07	October 26, 2007	VTT, Finland
G7	N°VTT-S-8932-06	October 5, 2006	VTT, Finland
N3	N°RTE852/05	March 8, 2005	VTT, Finland
N5	N°RTE658/05	February 28, 2005	VTT, Finland

All test reports as per IMO FTP Code, Annex 1, Part 5 [testing standard: IMO Resolution A.653(16)]

3.2 - Smoke and toxicity: See [4.5]

4. APPLICATION / LIMITATION:

4.1- AluCoat facing was tested on PAROC Marine Slab 30 (30kg/m³). So AluCoat facing may be applied on any non-combustible material having a density higher or equal to 22.5 kg/m³.

4.2- AluCoat T facing was tested on PAROC Marine Slab 60 (60kg/m³). So AluCoat T facing may be applied on any non-combustible material having a density higher or equal to 45 kg/m³.

4.3- LF1, G1, G2, G3, G4, G7, N3 & N5 facings were tested on PAROC Marine Slab 40 (40kg/m³). So such facings may be applied on any non-combustible material having a density higher or equal to 30 kg/m³.

4.4- LF1 tape was tested with Paroc Marine Mat 35 LF1 (35kg/m³). Thus it can be used together with mineral wool faced with F1 facing with the limitations as per item 4.3. Maximum width of tape is 50 mm.

4.5 - These products are considered to comply with the requirements of IMO Resolution MSC 61(67) [FTP Code] Annex 1, Part 2 in pursuance of IMO FTP Code Annex 2 paragraph 2.2.

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

5. PRODUCTION SURVEY REQUIREMENTS:

5.1- The "AluCoat", "AluCoat T", "LF1", "LF1 tape", "G1", "G2", "G3", "G4", "G7", "N3" and "N5" are to be manufactured, examined and tested by "PAROC GROUP OY" in accordance with the type described in this certificate and Bureau Veritas Rules for the Classification of Steel Ships..

5.2 - Production sites are to be recognized by Bureau Veritas as per NR320 for HBV products. To this end "PAROC GROUP OY" has to make the necessary arrangements for a Society's Surveyor to perform visits and product audits at the production sites.

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- This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the materials at any time and that the applicant will accept full responsibility for informing shipbuilders, shipowners and their sub-contractors of the proper methods of fitting, use and general maintenance of the material (units, approved equipment) and the conditions of this approval.

7.2- This certificate supersedes the Type Approval Certificate N° 19367/A1 BV issued on 14/10/2011 by the Society.

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